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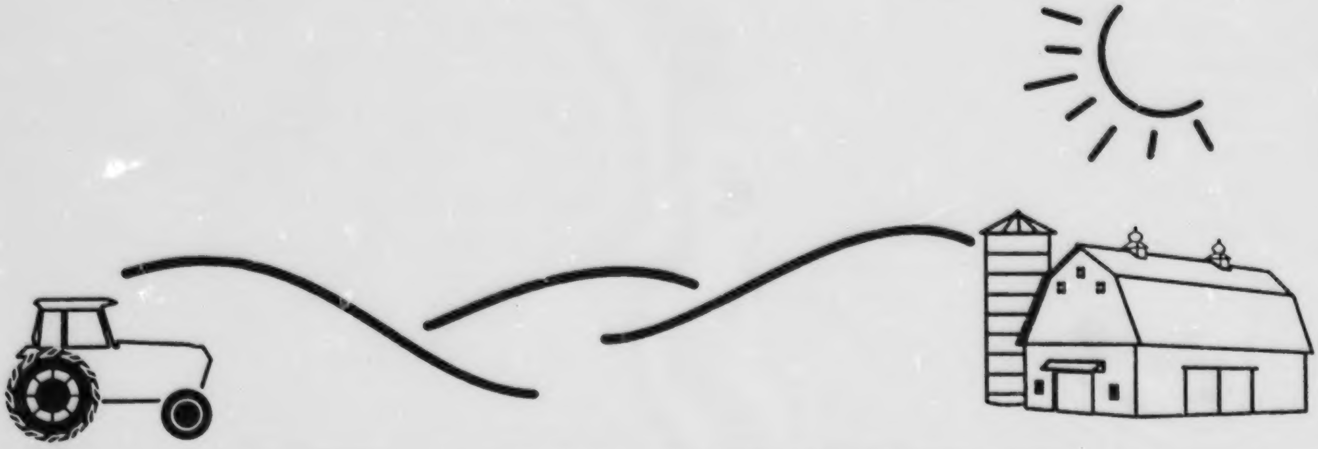
THE IMPACTS OF CLIMATE VARIABILITY ON AGRICULTURAL SUSTAINABILITY IN ALBERTA

The Impact of Climate Change on Soil Resources



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Nat Christie Foundation Project:

The Impacts of Climate Variability on Agricultural Sustainability in Alberta

Final Research Report:

Climate Change and the Soil Resources

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E. ABSTRACT

Increasing concentrations of greenhouse gases are expected to result in global warming which will affect soil erosion and agricultural productivity. The Erosion-Productivity Impact Calculator (EPIC) model was used to assess the impact of climate change on soil erosion and crop yields in Alberta. Two future climate scenarios suggesting a 4°C increase in average air temperature alone (SN_t) and 4°C and 28% increases in air temperature and precipitation (SN_{tp}) were inputted to the EPIC model along with crop rotation, soil, and tillage data. Results showed that wind-induced soil erosion increased under conventional tillage when higher temperature than current is expected, regardless of the precipitation level. Elimination of summerfallow and tillage and adoption of winter wheat-fallow should help to reduce erosion rates. Water-induced soil erosion increased when higher precipitation than current is expected. Increased temperature alone reduced water-induced soil erosion losses. In general, crop yields increased under climate scenarios as a consequence of the direct effect of atmospheric CO_2. However, with SN_{tp}, crop fallow rotations had lower yields compared to SN_t induced yields because of higher soil losses. Tillage did not have a significant effect on yields in contrast to the effects of the climate scenarios. This study suggested that wind and water erosion will increase under climate change but loss in top soil will not be detrimental to most of the crops.

F. SCIENTIFIC PAPER

I. Introduction

There are strong indications that atmospheric concentrations of greenhouse gases are increasing. As a result, global circulation models predict that average annual global temperature will increase 3 to 7°C and precipitation 7 to 32 % for a doubling of the atmospheric concentration of carbon dioxide (Wong et al., 1989; Drennen and Kaiser, 1993). In semiarid areas such as southern Alberta, agriculture is affected greatly by climatic variability and changes in climate could impact soil quality and agricultural production in unpredictable ways.

Soil quality and crop productivity are important for the sustainability of the agricultural industry. Loss of topsoil through erosion has reduced the soil productivitiy in many areas of western Canada (Larney et al. 1995a). Wind is considered to be the main climatic parameter causing soil erosion in semiarid western Canada (Bouzaher et al.,1994). Wind-induced soil erosion on agricultural soils is associated with high wind speeds, dry soil conditions, and cropping practices that leave the soil unprotected. Excessive tillage, especially on summerfallow, combined with large fields and no wind-breaks can produce conditions for an extreme risk of wind erosion. Even under more humid conditions, sandy soils and cultivated organic soils are vulnerable to wind erosion (Dumanski et al. 1986). Water erosion is caused by high intensity rainfall. On sloping soils, water drops and their kinetic energy remove soil particles from the top layer and erosion rate is directly correlated with the slope of the terrain and soil infiltration. A crop or crop residue protects the land from soil erosion as the canopy intercepts rain drops, reducing their kinetic energy and thereby lowering the runoff rates (Wicherek, 1994).

The soil surface layer is generally more fertile and has better water holding characteristics than deeper soil layer. Therefore, loss of topsoil by erosion reduces organic carbon content in the surface layer, a major source of plant nutrients (Cihacek and Swan, 1994). Soils subject to erosion will have their natural fertility diminished and consequently be more dependent on chemical fertilizers and potential risk of ground water contamination.

. It is important to assess the impact of climate change on soil quality and productivity in order to devise appropriate methods to mitigate the negative effects and maximize the positive ones. The selection and planning of soil conservation practices at the regional or farm level are important considerations in mitigating the negative environmental and economic impacts of reduced soil quality and productivity through erosion. A reliable mechanistic model that can represent the complexity with which soil conditions interact to determine soil productivity, together with Geographic Information Systems (GIS) are valid support systems that can help to predict the consequences of management scenarios on bio-physical resources under changing climate.

The objective of this study was to assess the effect of climate change on soil erosion and crop yields for different cropping sequences and tillage practices in Alberta.

II. Methods

The modelling approach used to conduct this study is presented in Figure 1.

IIa. Model description

The Erosion Productivity Impact Calculator (EPIC, Williams et al. 1990) was used in this study. This model was developed to describe crop growth and development by including the relationship between soil erosion and plant growth, as well as considerations of soil property changes.

A single model simulates growths of many crop species and yields using unique parameter values for each crop. Potential plant growth is simulated daily and constrained by stress factors such as water, nutrient, temperature and aeration. Phenological development is based on daily heat unit accumulation, starting at seeding and ending at maturity when accumulated heat equals potential heat unit. Crop yield is calculated by multiplying the total biomass at maturity by harvest index which is reduced by water stress. Productivity, expressed in crop yields, is indirectly affected by wind and water erosions.

The wind erosion equation, developed to predict annual average soil loss associated with a single crop (Skidmore, 1976) was ajusted for EPIC (Williams et al. 1990) to simulate the effects of various conservation practices in reducing daily soil loss (Yw). The following equation was used:

$$Yw = (FI)(FR)(FV)(FD)\int_0^T Yrw\,dt \quad \text{.......}(1)$$

where T is the time during which the wind exceeds the threshold velocity, FI, the soil erodibility factor, FR, the surface roughness factor, which is a function of both oriented roughness formed by tillage operation and roughness due to random cloudiness; FV represents the vegetation cover factor calculated on a daily basis as a function of standing live biomass, standing dead crop residue and flat crop residue; FD is the mean unsheltered travel distance of wind and Yrw is the wind erosion rate for prevailing wind direction calculated as a function of field dimension and wind direction.

Water erosion of soil due to rainfall-runoff events, and sprinkler and furrow irrigation is simulated in EPIC using different routines:

1. Universal Soil Loss Equation (USLE);
2. Modified Universal Soil Loss Equation (MUSLE);
3. Onstad-Foster (OF).

The following represents the generic equation used:

$$Ys = X(K)(C)(P)(LS)(R) \qquad (2)$$

where Ys is the sediment yield (t/ha), K, the soil erodibility factor, C, the crop management factor, P, the erosion control factor, LS the slope and steepness and R, the coarse fragment factor. The difference between the three options is expressed in the calculation of the X factor. For more details, the reader should refer to (Bouzaher et al., 1993). The MUSLE was used in our study as it provided better water erosion estimates (see section III.c).

Previous tests of the EPIC model for the Canadian prairies have shown significant correlation between observed and predicted crop yields (Moulin and Beckie 1992; Touré et al. 1995a; Kiniry et al. 1995). To date, no direct testing of the erosion submodel has been made due to lack of field data. However, studies have shown that EPIC is capable of estimating erosion rates of the magnitude of that measured in Lethbridge (Bouzaher et al.,1994).

IIb. Model inputs

The EPIC model requires inputs pertaining to climate, soil, crop sequences and tillage practices. These parameters are described as follow:

Climate data: Daily weather data including incoming solar radiation (MJ/m^2), maximum and minimum temperatures (^{o}C), rain (mm), snowfall (mm) and total precipitation (mm) for 30 years (1960-1989) were obtained from McGinn et al.(1995). These authors estimated historical weather data (baseline; BL) on grids of approximatively 50 km resolution, using a technique based on the nearest neighbor approach and the inverse distance squared method.

They developed climate scenarios based on historical temperature and precipitation and simulated temperature and precipitation from the Canadian Climate (GCM) 1XCO$_2$ and 2XCO$_2$ runs (Saunders and Byrne 1993; Saunders and Byrne 1994). A method similar to that of Mearns et al. (1992) was used to alter variance and amplitude of historical climate data. Amplitude change was performed based on GCM 1XCO$_2$ and 2XCO$_2$ estimates and variances were based on the GCM predicted variance and a random selection of variances. A detailed description of the method is summarized in McGinn et al. (1995). One hundred sixty six grid points with complete weather data, mostly located in agricultural areas, were selected for this study (Figure 2). We selected two scenarios; scenario 5 (SN_t) with historical precipitation and no change in variance for temperature, yielding 4°C increase in average and scenario 4 (SN_{tp}) with GCM-predicted variance for temperature and precipitation, corresponding to 4°C and 28% increase (Tables 1 and 2).

Wind data: The EPIC model requires wind frequency in 16 directions (N, NNE, NE, ENE..., etc) and average monthly wind velocity to simulate daily wind data. Thirty year average (1951-1980) wind statistics were obtained from Environment Canada (1982). These statistics, available for 27 climatological stations across Alberta (Figure 3), included average monthly wind speed in all directions and wind frequency in each direction. The data were downscaled to fit the weather grids and processed to generate appropriate data format for the EPIC model (Table 3). The downscaling procedure was based on creating raster maps of each parameter and direction. This was done by filling in each map cell with interpolated data, based on the paramater value in surrounding grids and their inversed squared distance.

For simplicity, historical wind amplitude and patterns were assumed to remain unchanged for the scenarios although some change associated with temperature and precipitation changes is to be expected.

Crop and management data: The crop growth subroutine in EPIC was developed to simulate crop growth described by parameters related to leaf area and photochemical efficiency. Values for spring wheat, winter wheat and canola (Table 4) were based on previous evaluations of the model on the Canadian prairies (Touré et al., 1995; Kiniry et al., 1995; Bouzaher et al., 1994).

Photosynthetic rates were increased by 25% for spring wheat, winter wheat and canola for $2XCO_2$ equivalent according to reports from controlled experiments where water, nutrient, temperature, and pest pressure were optimum (Richard et al., 1990; Mearns et al. 1990). However Cure an Acock (1986) reported that low nutrient concentrations limited the responses of most crops to atmospheric CO_2.

Seeding date may affect soil erosion which is altered by the type of crop and tillage. Seeding date is affected by climate change as temperature and precipitation are the main parameters controlling crop development (Stewart et al., 1990). An empirical seeding date model (Major et al., 1995) was developed based on long-term spring wheat data. Predicted seeding dates from this model were used as input to the EPIC model. Estimated spring wheat seeding dates were assumed for canola. Seeding date for winter wheat was assumed to be 137 days after spring wheat was seeded, based on the lag between seeding dates for both crops in Lethbridge (Kenneth et al., 1988; Major et al., 1995).

Four cropping sequences including continuous wheat (WW), wheat-fallow (WF), winter wheat-fallow (WiF) and canola-wheat-fallow (CWF) under two tillage systems, conventional and no-till (Table 5) were investigated for historical climate (baseline; BL) and climate scenarios (SN_{tp}, SN_t). The rotation combinations were run, using EPIC, to produce average parameters. For example, wheat after fallow and fallow after wheat were run and outputs were averaged to represent WF. In fallow years, 4 tillage passes were assumed (Jonhston et al. 1995) under conventional tillage and herbicide was applied under no-till (Table 5).

Soil landscape data: Soil attributes were extracted from the Canadian Soil Information System (CanSIS) database (Shields et al., 1991) and Tajek (personal communication). This was done by overlaying weather grid points and soil polygons using the Geographic Resources Analysis Support System (GRASS version 4.1, U.S. Army Construction and Laboratory, Champaign, IL.). Table 6a presents input soil parameters for EPIC. Field capacity was calculated based on the available soil water (ASW in upper 120 cm) and soil wilting point (WP; 0.1 was assumed):

$$FC = ASW/120 + WP \quad \text{.......................} (3)$$

Missing soil data were estimated by the EPIC model. The sensitivity of the model to these parameters was evaluated at the Lethbridge grid point. The test did not detect any change in yield run without the missing values compared to the run with these data. This suggested that the model could be run without these parameters. From the 166 grid points (Figure 2), only 136 had complete soil parameters to run the EPIC model.

Soil landscape attributes (Table 7) were obtained from the CanSIS database and from Bouzaher et al. (1994). A list of default values used for the EPIC simulations are presented in Table 8.

IIc. Outputs

Outputs from EPIC include wind and water erosion rates, and crop yields and residues. These were transfered to the GRASS to perform spatial analysis under historical and future climate scenarios.

A series of shell scripts were written to create input files and execute EPIC for each of the 136 grid points. The shell script consisted of a VMS command program (Touré and Major, 1996) which called a fortran program to extract climate data, seeding date and management data and soil type. This was repeated for the 136 grid points. The soil type occupying the largest area within a grid was used to represent that grid.

The EPIC model was then executed to generate output files containing geographic coordinate of grid points, 30 year average water and wind erosions and crop yields and residues. The command programs were run for the historical (BL) and the climate scenarios (SN_{tp} and SN_t). The geographic coordinates (latitude and longitude) of each grid were then converted to UTM coordinates in the GRASS to create sites files containing UTM coordinates and corresponding parameters. Other shell scripts in the UNIX environment were written (Touré and Major, 1996) to create raster and vector maps. Raster maps were generated by filling in each map cell with interpolated data, based on parameters in surrounding grids and their inversed squared distance.

The raw values for soil erosion, crop yields and residues parameters for each grid point are listed in Appendix A. Additional reports were generated to determine the concordance of the parameters with the Regional Municipalities of Alberta (Appendix B), for each of the Crop Reporting Districts of Alberta (Tables 10, 12, 14 and 16) and for Soil Landscape of Canada (Appendix C). The EPIC model output parameters were regrouped in classes to produce different maps (Appendix D).

III. Results and discussion

III.a Crop residue

Comparison with measurement: Crop residue data for spring wheat were obtained from a long-term fallow management initiated in 1955 at the Agriculture and Agri-Food Canada Research Center in Lethbridge (Johnston et al. 1995). Total spring wheat crop residue at seeding was 1.51 t/ha for no-till and 0.67 t/ha for three tillage passes during the fallow year. Estimated (30 year average) amount of spring wheat residues at seeding for WF for the Lethbridge grid point (BD33: latitude = 49.28 N, longitude = 113.25 W) were 1.32 t/ha for no-till and 0.20 t/ha for four tillage operations. The lower estimated residue level for conventional tillage were related to the number of tillage passes and the type of machinery used for tillage. Quantitatively, these results were in agreement with the observations as EPIC predicted high crop residue levels for no-till and low residue level for conventional tillage.

Rotation effect: Rotation also had a significant effect on crop residue levels (Table 9a). The fallow crop rotation produced less residue than continuous cropping, particularly WF. For example, under historical climate for no-till, the residue level for WF was 1.32 t/ha and 3.23 t/ha for WW (Table 9b). WW had the highest residue amount followed by CWF, WiF, CWF and WF.

Tillage effect: Tillage had a significant effect on crop residue levels (Table 9a). Zero tillage resulted in higher residue than conventional (1/2 of no-till residue levels) because residues are mixed into the soil when tillage is applied and there is faster decomposition, therefore less material is left on the soil surface.

Climate effect: Climate had significant effect on crop residue (Table 9a). Changes in the quantity of crop residues under a changing climate were influenced by crop type. Under no-till, increased air temperature resulted in increased residue except for CWF rotation which could experience higher water stress. Under conventional tillage, there was a decrease in crop residue. The combined effect of higher temperature and precipitation was an increase in residue. Reduced tillage and frequency of fallow increased residue. Under conventional tillage, there was increase relative to SN_t induced residues, except for CWF rotation.

Location effect: Location did not significantly affect residue amount (Table 10). The highest residue amounts were located in the centre of the province (CD10) and the areas with low residue amount were in the dryest part of the province (CD2).

III.b Wind erosion

Comparison with measured losses: Quantified wind erosion losses were obtained on one site near Lethbridge, Alberta (Larney et al., 1995b). A total of 144 t/ha of soil was estimated to be eroded from a completely exposed (no residue) fallow field, as a consequence of 16 erosion events that occured between April 1991 and May 1992. These data cannot be compared with EPIC outputs as a complete bare soil cannot be simulated. The maximum annual wind erosion estimated in our study under the historical climate for wheat-fallow was 66.72 t/ha. However, Bouzaher et al. (1994) concluded that EPIC is capable of predicting erosion rates of the magnitude measured near Lethbridge. Due to lack of data, this study focused on relative comparison rather than to predict absolute values.

Rotation effect: Wind erosion rates under the different rotations were significantly different, except for CWF and WF (Table 11a). Overall, CWF was the most affected by wind erosion followed by WF, WW and WiF, whereas, under no-till, CWF had the highest rates and WiF the lowest. Under conventional tillage, WF produced the highest erosion rate and WiF the lowest (Table 11b). Residue protecting the soil from erosion in the fallow year were buried under conventional tillage making the soil susceptible to erosion when more frequent fallow cropping practices are adopted. The potential for fallow cropping to store more water under no-till, except for CWF, makes it less sensitive to wind erosion compared to continuous cropping.

Climate effect: Climate scenarios SN_{tp} had significant effect on wind erosion rate, whereas SN_t did not (Table 11a). In general, increased temperature was accompanied by wind erosion decreases with higher decreases when precipitation was increased. Some crop may not be at optimum temperature under current climate and increase in temperature may help increase the biomass accumulation and residue, thereby, decreasing wind erosion. In addition, the fertilizing effect of atmospheric CO_2 may be beneficial. However, with SN_t, there was increase in wind erosion relative to baseline under conventional tillage for WF because of higher tillage passes leaving the soil unprotected and for CWF as it uses most of the water accumulated during fallow years (Table 11b).

Tillage effect: Tillage had a significant effect on erosion rate (Table 11a). Conventional tillage produced higher erosion rates compared to no-till treatment for all of the rotations. This simulation finding is in agreement with the knowledge that increased tillage reduces crop residue and less cover is left to protect the soil from erosion. The WF rotation was the most sensitive to tillage practices because of the lack of cover during fallow years: average erosion rates under the historical climate increased from 1.85 t/ha with no-till to 5.33 t/ha for conventional tillage (Table 11b). WiF was less affected by tillage practices because of higher moisture during seeding.

Location effect: Wind erosion varied with location (Table 12). The southern area of the province had higher wind erosion rates than the north. The Lethbridge and Claresholm crop reporting districts were the most susceptible to wind erosion with values exceeding the critical rate of 10 t/ha (Dumanski et al. 1986) for conventional tillage.

III.c Water erosion

Comparison with measurement: Our simulation results were in general agreement with experimental data collected in Alberta. Total rainfall-induced erosion over a ten-year period was determined by Toogood (1963) at a site near St. Albert, Alberta. Average rates measured were 2.1 t/ha for fallow after wheat, 0.9 t/ha for wheat after fallow. Estimated potential water erosion rates for summerfallow was 4.9 t/ha/yr for Alberta as reported by Coote (1984). Our 30 year simulation results, for wheat under summerfallow at the nearest grid point (latitude = 53.40 N, longitude = 113.25 W) to St. Albert (latitude = 53.39 N, longitude = 113.32 W), was 3.56 t/ha/yr, higher than the average observation of 1.5 t/ha/yr, in part because the simulation was conducted on a larger area (Soil Landscape Polygon) than the experiment site. However, the simulated soil loss by water erosion under the historical climate, 3.11 t/ha/yr (Table 13b), was close to the value reported by Coote for the province of Alberta under no-till WF.

Rotation effect: Similar to wind erosion, water erosion from summerfallow and continuous cropping systems were significantly different except for CWF which had similar water erosion rate compared to WW (Table 13a). This is because of the number of tillage passes, fewer than crop-fallow rotations. Summerfallow cropping systems were more susceptible to water erosion than continuous cropping or CWF. WiF had the highest erosion rate followed by WF, WW and CWF.

Climate effect: Climate scenario SN_{tp} only had significant effect on water erosion (Table 13a). In general, water erosion decreased with SN_t because of higher temperatures and increased with SN_{tp} because of higher precipitation levels than we currently experience. These results were consistent with our expectations because higher temperatures favours more evaporation which leaves less water on the soil surface for erosion to occur. With higher precipitation on the other hand, additional water is available to transport more soil particle from the surface.

Tillage effect: Tillage had a significant effect on erosion rates (Table 13a). As was the case with wind erosion, conventional tillage produced higher erosion rates compared to no-till treatment because the higher number of tillage passes breaks down soil aggregates and reduces the amount of crop residue cover.

Location effect: Water erosion in Alberta was also influenced by location (Table 14). Western areas of the province CD14, CD3, and CD9 had high erosion rates because of steeper slopes and higher precipitation. The areas with lowest water erosion were located in the south east, such as Medicine Hat and Lethbridge.

III.d Crop yields

Comparison with measurement: EPIC has been evaluated using a wide range of soil and climatic conditions in Canada and the USA, providing evidence that it fairly simulates long-term mean yields although it may not adequately represent year to year variability (Moulin and Beckie, 1993; Kiniry et al. 1995; Touré et al., 1995). We found that yield predicted using EPIC deviated -19 to 29 g/m^2 from 80 years average observations depending on rotations (Touré et al., 1995). The ability of EPIC to predict long-term mean yields with good accuracy makes it a good tool for climate change assessment which is based on long term prediction (Kiniry et al. 1995).

Rotation effect: Rotation had a significant effect on crop yield (Table 15a). The fallow-crop rotation produced higher yields than continuous cropping because of increased soil water accumulation during the fallow year. Also, the amount of residue during fallow years was an important source of nutrients when returned to the soil. Left on the soil surface, crop residues also serve as a mulch to decrease soil temperatures and increase soil moisture (Cihacek and Swan, 1994). Wheat yield from CWF was the highest, followed by yield from WiF, WF,canola yield from CWF and yield from WW.

Climate effect: Climate scenarios had a significant effect on yield (Table 15a). In general, crop yield increased under a changed climate scenarios because of the fertilizing effect of atmospheric CO_2. It was assumed that this would be a 25% increase in biomass-energy ratio for 660 ppm atmospheric CO_2 concentrations. The WF and CWF rotations using SN_{tp} had lower yields compared to SN_t induced yield, because of soil erosion (combined wind and water erosion). Climate change may be detrimental to canola yield from CWF as lower yield than current estimate was predicted using SN_{tp} (Table 15b).

Tillage effect: Tillage had a significant effect on yields (Table 15a). Conventional tillage resulted in a decrease in yield because of higher erosion rates compared to no-till. Overall, WW and WF were the least affected by tillage implement and CWF the most sensitive (Table 15b).

Location effect: In general, areas located in the centre of the province had highest yields, primarily because of higher soil moisture (Table 16). The areas with the lowest yields were located in the driest part of the province (south east).

IV. Conclusions

Two future climate scenarios, one with a 4°C increase in average air temperature (SN_t) and another with 4°C increase temperature and 28% higher precipitation (SN_{tp}), were used in conjunction with EPIC model to assess soil erosion and crop residue and yield changes. Quantitative and qualitative evaluations of the model were performed with various parameters related to erosion and crop productivity.

The EPIC model was found to perform a reasonable simulation of wind (qualitative test) and water erosion rate, residue accumulation and yield. The model also responded well to tillage, rotation and spatially distributed effects for wind and water erosion, crop residues and yields.

A sensitivity analysis of the impact of the two climate scenarios led to the conclusions that: (1) wind erosion will increase under conventional tillage for spring wheat under summerfallow and canola-wheat under summerfallow. Continuous cropping, winter wheat under fallow and no-till treatments will reduce erosion under climate change; (2) water erosion will increase with higher precipitation and increased temperature alone will reduce water erosion. As with wind erosion, no-till reduced water erosion; (3) crop yield increased under warmer climate mainly because of the direct effect of atmospheric CO_2 except for SN_{tp} in which canola yield was lower than current estimate. In general, tillage had significant effect on yields; (4) increased in air temperature produced more residue as tillage and fallow frequency decreased.

This study suggested that wind and water erosion will increase under climate change but loss in top soil will not be detrimental to most of the crops we investigated because of the fertilizing effect of atmospheric CO_2. However, these results are constrained by critical uncertainties related to the crop model assumptions and the GCM climate predictions, particularly with respect to precipitation. In addition, historical wind data were assumed to remain unchanged for the climate scenarios although some change associated with temperature and precipitation changes is to be expected.

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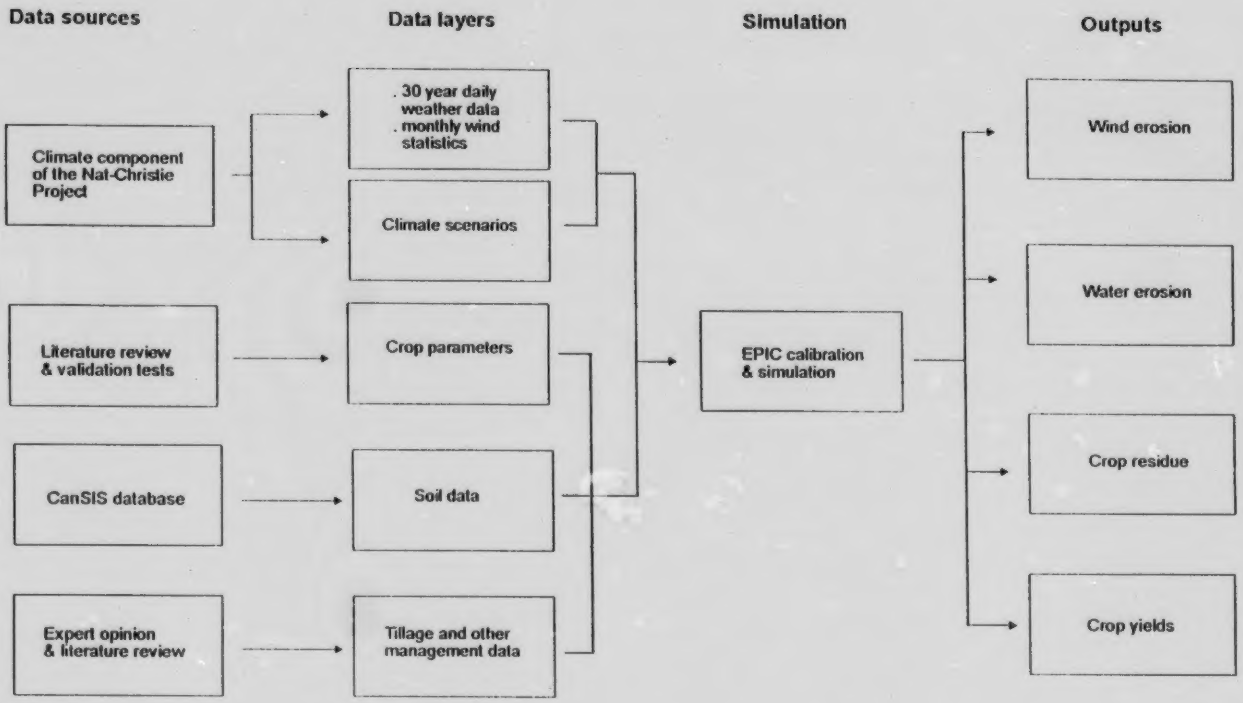

Data sources
Data layers
Simulation
Outputs
Climate component of the Nat-Christie Project
. 30 year daily weather data
. monthly wind statistics
Climate scenarios
Literature review & validation tests
Crop parameters
CanSIS database
Soil data
Expert opinion & literature review
Tillage and other management data
EPIC calibration & simulation
Wind erosion
Water erosion
Crop residue
Crop yields

Figure 1: Diagram flow of the modeling procedure

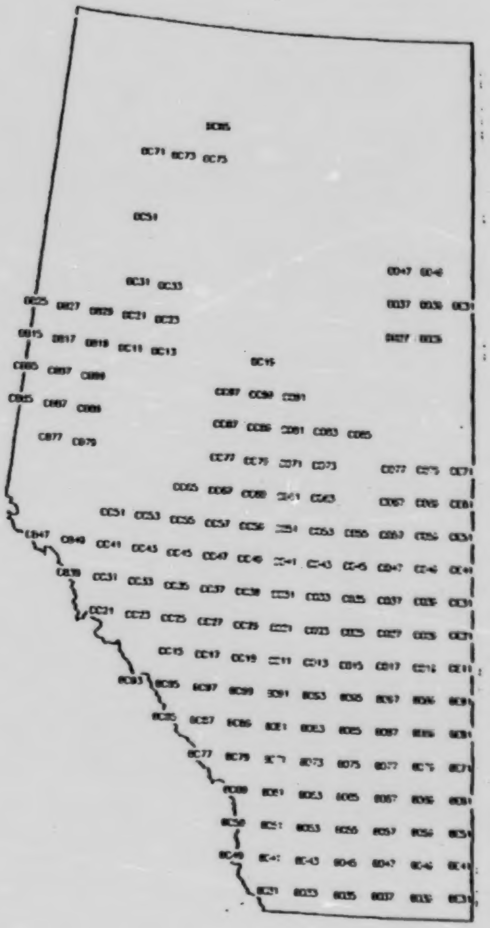


Figure 2: Location of the 166 weather grid points with complet data set across Alberta.

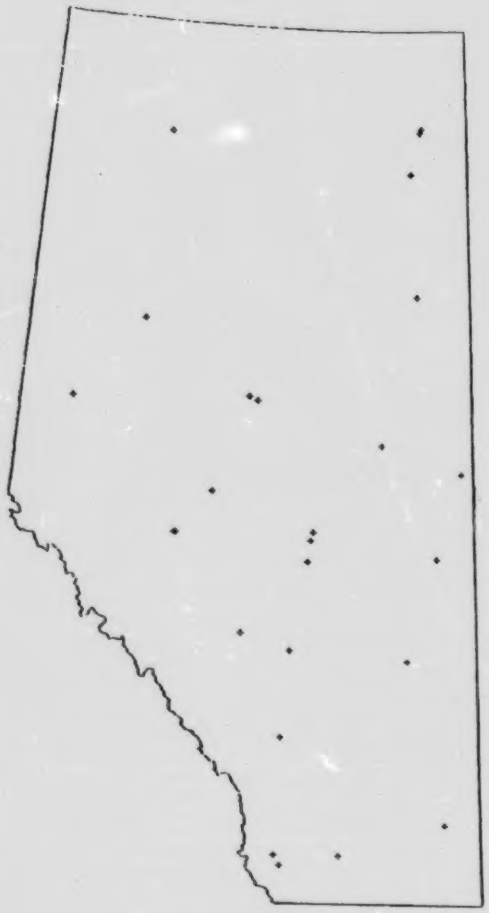
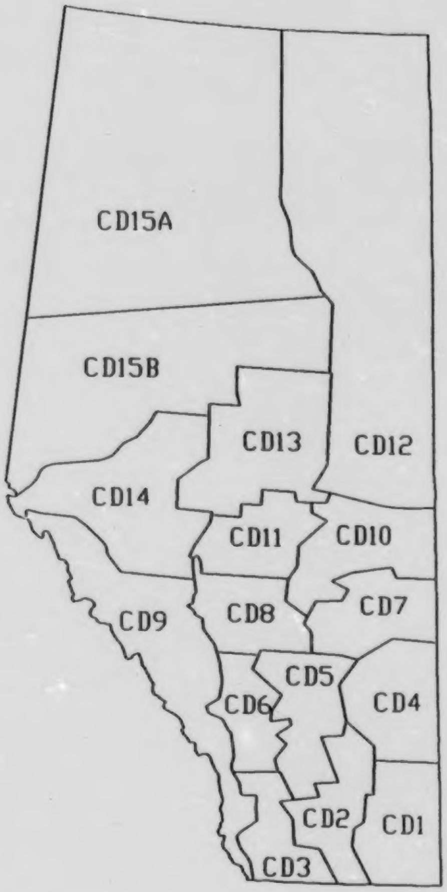


Figure 3: Location of the weather stations where wind data were recorded for the period 1951-1980


CD15A
CD15B
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CD14
CD11
CD10
CD8
CD7
CD9
CD5
CD4
CD6
CD2
CD1
CD3

Figure 4: **Map of Alberta Crop Reporting Districts**

Table 1 : Ratio of variances and corresponding climate scenarios (SN).

Ratio of variances	0.5^t	1^t	2^t	GCM^t	Historical temperature
0.5^p	SN1				
1^p		SN2			
2^p			SN3		
GCM^p				SN4 (SN_g)	
Historical precipitation		SN5 (SN_t)			Baseline (BL)

^{t} : ratio of variances used to alter historical temperature.

^{p} : ratio of variances used to alter historical precipitation.

Table 2a: Annual mean total precipitation (mm) statistics for Alberta according to the scenarios.

Scenarios	Mean	Std.	Min.	Max.	% Change
SN_{tp}	618	120	382	958	28
SN_t	481	95	291	740	0
BL	481	95	291	740	

Table 2b: ~~Annual~~ Daily mean maximum temperature (°C) statistics for Alberta according to the scenarios.

Scenarios	Mean	Std.	Min.	Max.	Δ
SN_{tp}	12.3	2.1	7	17	3.8
SN_t	12.2	2.1	7	17	3.7
BL	8.5	1.7	4	17	

Cd n

Table 3a: Wind statistics from observed data (1951-1980) at the Lethbridge weather station (latitude = 49° 38", longitude = 112° 48").

	Jan	Feb	Mar	Avr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Percent frequency (%)											
Direction												
N	5.6	6.2	6.3	7.2	6.2	4.7	4.6	5.3	6	4.4	4.9	5.2
NNE	4	3.5	3.4	3.8	3.5	3.2	3	3.2	2.6	2.2	2.9	2.9
NE	4.3	4.4	3.7	4.1	3.9	3.6	3.5	3.8	2.9	2	2.5	3.3
ENE	2.8	2.8	2.7	2.7	3	2.4	3.2	3.3	2.4	1.4	2	2
E	3.3	3.9	3.5	3.6	4.3	3.5	4.6	4.2	3.2	1.7	2.3	2.3
ESE	2	2	2.1	2.7	2.8	2.4	2.8	2.9	2.3	1.6	1.5	1.4
SE	2.3	3.2	3.2	4.1	4.9	4	4.8	4	3.7	2.7	2.2	1.8
SSE	1.7	1.7	2.2	2.9	3.6	3	3.4	2.8	2.9	2.1	1	1.7
S	3.8	3.8	5.1	5.2	5.4	5.1	5.3	4.8	5.8	5.6	5.3	4
SSW	4.5	4.5	6.1	5.2	4.6	4.7	5.3	5	5.9	6.6	6.1	5.1
SW	10.7	10.3	12.3	10.7	9.7	10.5	11.1	10.5	12.2	13.8	13	12.2
WSW	17.9	17	15.8	14.4	13.1	15.3	14.1	14.1	14.3	19.2	18.4	19.5
W	19.3	18.5	16.9	17	16.7	19.9	16.6	17	17.1	21.8	21.5	21
WNW	4.4	4.5	4.8	4.6	5.4	6	5.3	5.8	5	4	4.3	4.5
NW	4.2	4.1	4.3	4.7	5.9	5.4	5	5.4	5.6	3.9	4.2	4.6
NNW	3.3	3.3	3.7	4.3	4.3	3.5	3	3.5	4.3	3.3	3.1	3.6
	Speed (m/s)											
	5.9	5.8	5.8	5.9	5.7	5.6	4.7	5.1	6.3	6.2	6.4	5.7

Table 3b: Wind statistics stimated from the nearest grid point (BD45; latitude = 49º 41", longitude = 112º 30") to Lethbridge.

	Jan	Feb	Mar	Avr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Percent frequency (%)											
Direction												
N	6.9	6.6	6.4	7.5	6.7	5.6	5.6	5.8	6.7	4.7	5.7	5.5
NNE	3.5	3.7	3	4	4	3	3	3	3	2	2.7	3
NE	3.7	3.8	4	4	4	4	4	4	3	2	3	3
ENE	2.7	3	3	3	3	2	3	3	2	1	2	2
E	3	4	4	4.3	4.3	4	5	4	3	2.1	2.2	2.2
ESE	2	2	2	3	3	2	3	3	2	2	2	1
SE	2.5	3.5	3.5	4	5	4	5	4	4	3	2	2.3
SSE	2	2	2	3	4	3	3	3	3	2	1.1	2
S	4	4	5	5	5	5	5	5	6	6	5	4
SSW	4.6	4.6	5.5	5	4.6	4.6	4.6	4.6	5.5	6.4	5.5	5
SW	11.1	10.2	11.9	11	9.9	10.8	11	11	12	14.2	13.3	12.4
WSW	16.3	15.4	14.7	13.3	12.4	14.2	13.1	13.1	13.1	17.4	16.5	18.2
W	19	19	17.3	16.8	16.8	19.7	16.9	16.9	17	21.7	21.6	20.8
WNW	4	5	5	5	5	6	5	6	5	4	4	5
NW	4.1	4	4	5	6	5	5	5	6	4	4	5
NNW	3.1	3	4	4	4.1	4	3.4	4	4.1	3	3	4
	Speed (m/s)											
	6	5.9	6	6	6	5.8	5	5	5	6	6	6

Table 4. Crop parameters selected for EPIC simulations.

Parameter	Description	Winter wheat	Spring wheat	Canola
WA :	Biomass-energy ratio at 330 ppm CO_2 (Kg/ha/MJ)			
RUEC2 :	Second point on RUE-CO_2 curve. Number before decimal is a hign CO_2 level of the future (ppm). Number after decimal is the resulting RUE value times 10.	33.0	31.0	34.0
HI :	Harvest index (Kg/Kg)	660.41	660.39	660.42
T_b :	Optimal temperature for plant growth (°C)	0.50	0.42	0.30
T_g :	Minimum temperature for plant growth (°C)	18.0	18.0	21.0
DMLA :	Maximum potential leaf area index	0.0	0.0	5.0
DLAI :	Fraction of growing season when leaf area starts declining	5.0	5.0	4.5
DLAP1, 2 :	Two points on optimal leaf area development curve. Numbers before decimal are percent of growing season. Numbers after decimal are fractions of maximum leaf area index (%)	0.50	0.60	0.50
DLAP2 :		5.05	15.01	15.02
RLAD :	Leaf area decline rate parameter	45.95	50.95	45.95
RBMD :	Biomass-energy ratio decline rate parameter	0.5	1.0	0.15
ALT :	Aluminum tolerance index (1-sensitive;5-tolerant)	1.0	1.0	0.3
CAF :	Critical aeration factor	2.0	2.0	2.0
HMX :	Maximum crop height (m)	0.85	0.85	0.85
RDMX :	Maximum root depth (m)	1.2	1.2	0.9
CVM :	Maximum value of C factor for water erosion	1.2	1.2	0.9
CNY :	Fraction of nitrogen in yield	0.03	0.03	0.03
CPY :	Fraction of phosphorus in yield	0.025	0.025	0.38
WSYF :	Fraction of water in yield	0.0022	0.017	0.079
PST :	Pest (insects, weeds and desease) factor	0.190	0.190	0.17
WCY :	Fraction of phosphorus in yield	0.95	0.95	0.95
IDC :	Crop category number;	0.12	0.12	0.08
	5 = Cold-season annual crop	5	5	5
BN1 :	Nitrogen uptake parameter (P fraction in plant at emergence)	0.06	0.06	0.044
BN2	Nitrogen uptake parameter (N fraction in plant at 0.5 maturity)	0.023	0.023	0.0164
BN3	Nitrogen uptake paramter (N fractionin plant at maturity)	0.0134	0.0134	0.0128
BP1	Phosphorus uptake parameter (P fraction in plant at emergence)	0.0084	0.0084	0.0074
BP2	Phosphorus uptake parameter (P fraction in plant at 0.5 maturity)	0.0032	0.0032	0.0037
BP3	Phosphorus uptake parameter (P fraction in plant at maturity)	0.0019	0.0019	0.0023
FRST1:	Two points on frost damage curve. Numbers before decimal are minimum daily temperature (°C). Numbers after decimat are fractions of lai loss for given minimum temperature			
FRST2 :		15.050	5.01	5.05
PHU :	Potential heat units (degree-day)	30.10	15.01	15.10
		1800	1500	1000

Table 5: Tillage operations used for conventional and no till.

		Tillage	
	Date	Conventional	No till
Crop	Seeding date - 10	Noble blade	
	Seeding date	N fertilizer	N fertilizer
	Seeding date	Seeding	Seeding
	Seeding date + 109	Harvest	Harvest
	Harvest date + 45	Noble blade	
Fallow	Seeding date	Noble blade	Roundup
	Seeding date + 51	Noble blade	Roundup
	Seeding date + 82	Noble blade	Roundup
	Seeding date + 123	Noble blade	Roundup

Seeding date was estimated for historical and climate scenarios using an empirical seeding date model (Major et al. 1995).

Table 6: Soil attributes used to run the EPIC model; data represent the subsoil "ABC" pertaining to the gray lusovic group.

	Parameter	Value					
1.	Depth from surface to the bottom	0.01	0.18	0.23	0.58	0.91	1.00
2.	Bulk density of soil layer (t/m^3)	1.30	1.30	1.30	1.50	1.50	1.50
3.	Wilting point* (m/m)	0	0	0	0	0	0
4.	Field capacity* (m/m)	0	0	0	0	0	0
5.	Sand content (%)	45.0	45.0	43.0	41.0	42.0	43.0
6.	Silt content (%)	30.0	30.0	29.0	27.0	28.0	29.0
7.	Organic N concentration* (g/t)	0	0	0	0	0	0
8.	Soil PH	5.2	5.2	4.6	4.3	4.9	5.5
9.	Sum of bases (cmol/kg)	16.8	16.8	9.6	14.4	14.9	15.6
10.	Organic carbon (%)	2.00	2.00	0.40	0.40	0.40	0.50
11.	Calcium carbonate* (%)	0	0	0	0	0	0
12.	Cation exchange capacity (cmol/kg)	24.0	24.0	13.0	15.0	18.0	17.0
13.	Coarse fragment content (% vol)	5.0	5.0	5.0	5.0	5.0	5.0
14.	Nitrate concentration* (g/t)	0	0	0	0	0	0
15.	Labile P concentration* (g/t)	0	0	0	0	0	0
16.	Crop residue* (t/ha)	0	0	0	0	0	0
17.	Bulk density (oven dry)* (t/m^3)	0	0	0	0	0	0
18.	Phosphorus sorption ratio*	0	0	0	0	0	0
19.	Saturated conductivity* (mm/h)	0	0	0	0	0	0
20.	Subsurface flow travel time*	0	0	0	0	0	0
21.	Organic P concentration* (g/t)	0	0	0	0	0	0

*: Parameter not available for all subsoil; they are estimated by the EPIC model.

Table 7a: Alberta soil lansdscape attributes used as input to the EPIC model.

Soil groupe	Slope steepness	Runoff curve
A : Brown chernozem	0.02	63.0
B : Dark brown chernozem	0.06	75.0
C : Black chernozem	0.12	83.0
D : Dark grey chernozem	0.23	87.0
E : Gray brown chernozem	0.45	--
F : Gray luvisol	0.60	--

Table 7b: Alberta soil lansdscape attributes used as input to the EPIC model (Continued).

Soil name	Soil groupe	Slope lenght	Soil name	Soil groupe	Slope lenght
DVS	A	60	HAN	B	70
DVS	A	60	FLU	A	60
KLM	A	60	IRM	A	60
WNW	A	60	FRY	C	35
BVH	B	70	HND	A	60
IRM	A	60	COA	B	100
DVS	B	50	HUK	A	60
BVH	C	35	MAB	D	40
HAN	B	70	FMT	C	55
DEL	A	60	BVL	B	60
TOM	A	60	HUB	C	90
CHN	A	60	HUK	A	60
HBM	A	60	HND	B	70
ABC	A	60	CFD	A	60
EOR	B	70	LET	B	50
DVG	D	90	CFD	B	70
MYW	A	60	LET	A	60
PRV	A	60	HND	B	70
MAB	B	50	TAG	B	60
MCO	A	60	KLM	A	60
AGS	A	60	AGS	A	60
CTE	A	60	AGS	A	60
BVL	A	60	PED	A	60
LAD	A	60	ATL	B	100
ATL	A	60	ESH	A	60
FLU	B	50	LTA	B	100
ESH	A	60	BTN	B	100
CMO	A	60	HKR	B	70
GDB	A	60	MGS	B	50
HKR	B	70	CCL	A	60
HDY	B	50	HKR	B	70
HKR	A	60	FMT	B	50
DEL	B	100	DEL	B	100
LET	A	60	MAB	B	70
HKR	A	60	HND	B	70
EOR	A	60	FLU	A	60
HND	C	35	LET	A	60
TNW	A	60	LET	B	100
CRD	A	60	FLU	B	50
PUR	C	35	SDN	B	70
TAG	B	50	PUR	B	100
CFD	A	60	SPS	B	100
MSN	B	50	BZR	C	90
FAL	A	60	CYG	A	60
BTN	A	60	BZR	A	60
ATL	B	100	MLA	B	70
FAL	A	60	AGS	B	70
BTN	A	60			
ATL	A	60			
CTN	B	100			
LET	B	100			
CHN	A	60			
POK	A	60			
FMT	B	70			
POK	A	60			
HKR	B	30			
DVG	C	90			
CVD	B	50			
MGS	B	70			

Table 8: List of default values used for the EPIC simulations.

Variables	Description	Values	Comments/units
LET	Potential ET equation	1	Penman-Monteith
WSA	Watershed drainage area	5	hectares
CHN	Channel roughness factor	0.025	earth, uniform
SN	Surface roughness factor	0.200	Manning's N
FL	Field length for wind erosion	2.0	kilometers
FW	Field width for wind erosion	2.0	kilometers
ANG	Clockwise angle of length from north for wind erosion	90.0	degrees
ACW	Wind erosion adjustment factor	1	no acceleration
UXP	Power parameter of the modified exponential wind speed distribution	0.6	

From Bouzaher et al. (1994).

Table 9a: Significance of the rotation, tillage and scenario effects on crop residues (t/ha). Means in the same row with the same letter are not significantly different according to Duncan's multiple range test at P = 0.05.

Rotation	WW	WF	WiF	$\mathrm{C\underline{W}F}$	$\mathrm{\underline{C}WF}$
Mean	2.78a	0.80b	1.53c	1.54c	1.46d
Scenario	SN_{tp}	SN_{t}	BL		
Mean	1.69a	1.62b	1.59c		
Tillage	NT	CT			
Mean	2.10a	1.15b			

WW = Continuous spring wheat

WF = Spring wheat - fallow rotation

WiF = Wheat - wheat - fallow rotation

$\mathrm{\underline{C}WF}$ = canola yield under canola - wheat - fallow rotation

$\mathrm{C\underline{W}F}$ = wheat yield under canola - wheat - fallow rotation

NT = No-till

CT = Conventional tillage

Table 9b: Residue statistics (t/ha/yr) for spring wheat, winter wheat and canola rotations and tillage practices under climate at current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Rotations		WW		WF		$\text{C}\underline{\text{W}}\text{F}$		$\underline{\text{C}}\text{WF}$		WiF	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Mean											
	BL	3.23	2.13	1.32	0.22	2.24	1.20	1.76	1.01	1.56	1.21
	SN_t	3.35	2.08	1.38	0.18	2.20	1.07	1.82	1.01	1.86	1.22
	SN_{tp}	3.60	2.31	1.43	0.29	1.73	0.79	2.00	1.16	1.92	1.39
Maximum											
	BL	4.35	2.96	2.02	0.32	3.20	1.88	2.15	1.26	3.39	2.06
	SN_t	5.17	3.25	2.09	0.29	3.24	1.80	2.19	1.26	3.82	2.23
	SN_{tp}	5.40	3.46	2.04	0.78	2.71	1.25	2.38	1.47	3.19	2.51
Minimum											
	BL	0.27	1.78	1.04	0.15	1.12	0.33	1.12	0.64	0.87	0.68
	SN_t	0.27	1.63	1.01	0.12	1.23	0.30	1.25	0.68	1.03	0.86
	SN_{tp}	0.29	1.80	1.07	0.38	1.00	0.52	1.56	0.87	1.22	0.96
Standard deviation											
	BL	0.36	0.24	0.19	0.07	0.57	0.16	0.24	0.16	0.48	0.27
	SN_t	0.49	0.31	0.22	0.03	0.49	0.30	0.24	0.14	0.56	0.25
	SN_{tp}	0.48	0.30	0.21	0.03	0.27	0.33	0.18	0.10	0.46	0.32

Table 10a: Annual continuous spring wheat residue (t/ha) averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	3.22	2.04	3.41	2.02	3.60	2.23	1.06	0.99	1.12	1.09
CD2	Lethbridge/Brooks	3.12	1.98	3.23	1.91	3.43	2.13	1.04	0.97	1.10	1.07
CD3	Claresholm/Cardston	3.20	2.05	3.31	1.94	3.47	2.14	1.03	0.95	1.08	1.04
CD4	Hanna/Empress	3.25	2.11	3.33	2.05	3.51	2.23	1.02	0.97	1.08	1.06
CD5	Drummheller/Vulcan	3.31	2.15	3.52	2.14	3.73	2.35	1.07	1.00	1.13	1.09
CD6	Calgary/Olds	3.49	2.31	3.48	2.13	3.73	2.36	1.00	0.92	1.07	1.03
CD7	Stettler/Wainwright	3.29	2.16	3.60	2.24	3.86	2.48	1.10	1.03	1.17	1.15
CD8	RedDeer	3.15	2.07	3.25	2.01	3.52	2.27	1.03	0.97	1.12	1.10
CD9	RockyMountain-region	3.51	2.36	2.99	1.86	3.26	2.12	0.85	0.79	0.93	0.90
CD10	Camrose/Vermilion	3.56	2.34	4.06	2.54	4.31	2.77	1.14	1.08	1.21	1.18
CD11	Edmonton	3.13	2.05	3.36	2.08	3.64	2.35	1.07	1.02	1.16	1.15
CD12	LacLaBiche/StPaul	3.02	2.03	3.12	2.00	3.43	2.28	1.03	0.99	1.14	1.12
CD13	Barrhead/Athabasca	2.96	1.97	3.04	1.93	3.35	2.20	1.03	0.98	1.13	1.11
CD14	Edmonton-West	3.07	2.05	2.96	1.87	3.25	2.14	0.96	0.91	1.06	1.04
CD15A	NorthPeace	3.19	2.16	3.27	2.13	3.59	2.40	1.03	0.99	1.13	1.11
CD15B	SouthPeace	3.14	2.09	3.29	2.09	3.55	2.32	1.05	1.00	1.13	1.11

Table 10b: Annual spring wheat residue (t/ha) from wheat-fallow averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	1.30	0.19	1.43	0.16	1.39	0.27	1.10	0.83	1.07	1.40
CD2	Lethbridge/Brooks	1.25	0.19	1.33	0.15	1.28	0.26	1.07	0.79	1.03	1.37
CD3	Claresholm/Cardston	1.25	0.21	1.30	0.15	1.22	0.24	1.03	0.72	0.97	1.18
CD4	Hanna/Empress	1.30	0.21	1.37	0.17	1.34	0.29	1.06	0.83	1.03	1.36
CD5	Drummheller/Vulcan	1.38	0.22	1.46	0.18	1.39	0.28	1.06	0.81	1.01	1.27
CD6	Calgary/Olds	1.41	0.25	1.43	0.18	1.35	0.28	1.02	0.73	0.96	1.12
CD7	Stettler/Wainwright	1.40	0.24	1.51	0.20	1.43	0.31	1.08	0.84	1.02	1.26
CD8	RedDeer	1.26	0.23	1.31	0.18	1.24	0.29	1.03	0.81	0.98	1.27
CD9	RockyMountain-region	1.24	0.25	1.16	0.17	1.08	0.26	0.93	0.67	0.87	1.07
CD10	Camrose/Vermilion	1.57	0.27	1.70	0.23	1.60	0.33	1.08	0.86	1.02	1.23
CD11	Edmonton	1.30	0.22	1.36	0.19	1.30	0.29	1.04	0.84	1.00	1.31
CD12	LacLaBiche/StPaul	1.21	0.24	1.27	0.21	1.23	0.31	1.05	0.86	1.02	1.30
CD13	Barrhead/Athabasca	1.17	0.22	1.23	0.19	1.17	0.29	1.05	0.85	1.00	1.30
CD14	Edmonton-West	1.16	0.23	1.17	0.18	1.14	0.28	1.01	0.79	0.98	1.23
CD15A	NorthPeace	1.29	0.26	1.35	0.23	1.35	0.33	1.05	0.86	1.05	1.26
CD15B	SouthPeace	1.25	0.24	1.31	0.20	1.26	0.30	1.05	0.86	1.01	1.28

Table 10c: Annual canola residue (t/ha) from canola-wheat-fallow averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	1.34	0.76	1.44	0.78	1.74	1.01	1.07	1.03	1.30	1.33
CD2	Lethbridge/Brooks	1.40	0.79	1.45	0.78	1.73	1.01	1.03	0.99	1.23	1.28
CD3	Claresholm/Cardston	1.61	0.91	1.79	0.98	1.96	1.14	1.11	1.08	1.22	1.25
CD4	Hanna/Empress	1.44	0.83	1.51	0.85	1.83	1.08	1.05	1.03	1.28	1.31
CD5	Drummheller/Vulcan	1.67	0.95	1.64	0.93	1.87	1.10	0.98	0.97	1.12	1.16
CD6	Calgary/Olds	1.80	1.03	1.92	1.08	2.12	1.23	1.07	1.05	1.18	1.19
CD7	Stettler/Wainwright	1.80	1.02	1.78	0.99	1.95	1.13	0.99	0.98	1.08	1.11
CD8	RedDeer	1.89	1.08	1.94	1.07	2.12	1.20	1.02	1.00	1.12	1.12
CD9	RockyMountain-region	1.71	1.00	2.00	1.10	2.22	1.28	1.17	1.10	1.29	1.28
CD10	Camrose/Vermilion	1.90	1.09	1.84	1.01	1.99	1.15	0.96	0.93	1.05	1.06
CD11	Edmonton	2.01	1.15	1.95	1.08	2.09	1.18	0.97	0.94	1.04	1.03
CD12	LacLaBiche/StPaul	1.95	1.14	1.96	1.10	2.06	1.17	1.01	0.96	1.06	1.03
CD13	Barrhead/Athabasca	2.02	1.18	2.03	1.13	2.14	1.22	1.01	0.96	1.06	1.04
CD14	Edmonton-West	1.78	1.04	2.03	1.10	2.17	1.25	1.14	1.06	1.22	1.20
CD15A	NorthPeace	1.83	1.07	1.91	1.07	2.03	1.18	1.04	1.00	1.11	1.10
CD15B	SouthPeace	1.86	1.06	1.97	1.08	2.11	1.20	1.06	1.02	1.13	1.13

Table 10d: Annual spring wheat residue (t/ha) from canola-wheat-fallow averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	1.66	1.01	1.88	1.00	1.56	0.70	1.13	0.99	0.94	0.70
CD2	Lethbridge/Brooks	1.79	1.06	1.78	0.94	1.53	0.74	0.99	0.89	0.85	0.70
CD3	Claresholm/Cardston	1.74	0.94	1.86	0.93	1.65	0.79	1.07	0.99	0.95	0.84
CD4	Hanna/Empress	1.98	1.18	2.16	1.17	1.83	0.83	1.09	0.99	0.93	0.70
CD5	Drummheller/Vulcan	2.34	1.33	2.11	1.14	1.74	0.80	0.90	0.86	0.74	0.60
CD6	Calgary/Olds	2.10	1.14	2.24	1.15	1.77	0.83	1.06	1.01	0.84	0.73
CD7	Stettler/Wainwright	2.51	1.34	2.29	1.12	1.67	0.68	0.91	0.83	0.67	0.51
CD8	RedDeer	2.27	1.15	1.96	0.92	1.67	0.75	0.86	0.80	0.73	0.65
CD9	RockyMountain-region	1.52	0.83	1.80	0.87	1.64	0.78	1.18	1.04	1.08	0.94
CD10	Camrose/Vermilion	2.78	1.52	2.27	1.00	1.72	0.80	0.82	0.66	0.62	0.53
CD11	Edmonton	2.81	1.48	2.41	1.16	1.75	0.78	0.86	0.78	0.63	0.53
CD12	LacLaBiche/StPaul	2.70	1.42	2.53	1.22	1.84	0.86	0.94	0.86	0.68	0.61
CD13	Barrhead/Athabasca	2.71	1.37	2.46	1.15	1.68	0.76	0.91	0.84	0.62	0.56
CD14	Edmonton-West	1.68	0.80	2.06	0.91	1.64	0.70	1.23	1.13	0.98	0.86
CD15A	NorthPeace	2.41	1.23	2.41	1.17	1.99	0.94	1.00	0.95	0.83	0.76
CD15B	SouthPeace	2.24	1.04	2.33	1.05	1.76	0.82	1.04	1.01	0.79	0.78

Table 10e: Annual winter wheat residue (t/ha) from winter wheat-fallow averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	2.09	1.10	1.72	1.09	1.74	1.19	0.82	0.99	0.83	1.08
CD2	Lethbridge/Brooks	2.38	1.11	1.69	1.05	1.76	1.13	0.71	0.95	0.74	1.01
CD3	Claresholm/Cardston	1.81	1.07	1.63	1.08	1.75	1.15	0.90	1.01	0.97	1.08
CD4	Hanna/Empress	1.36	1.17	2.22	1.02	1.93	1.25	1.63	0.87	1.42	1.06
CD5	Drummheller/Vulcan	1.84	1.26	1.57	1.12	1.66	1.22	0.86	0.88	0.91	0.97
CD6	Calgary/Olds	1.82	1.49	1.63	1.13	1.74	1.29	0.90	0.76	0.96	0.87
CD7	Stettler/Wainwright	1.46	1.31	1.73	1.14	1.71	1.27	1.19	0.87	1.18	0.97
CD8	RedDeer	1.54	1.23	1.71	1.14	1.86	1.30	1.11	0.93	1.20	1.05
CD9	RockyMountain-region	1.68	1.42	2.01	1.28	2.16	1.55	1.19	0.90	1.28	1.09
CD10	Camrose/Vermilion	1.63	1.46	1.97	1.33	1.90	1.47	1.21	0.91	1.16	1.01
CD11	Edmonton	1.39	1.22	1.60	1.10	1.82	1.31	1.15	0.90	1.31	1.07
CD12	LacLaBiche/StPaul	1.25	1.06	2.04	1.44	2.03	1.55	1.63	1.36	1.63	1.46
CD13	Barrhead/Athabasca	1.29	1.06	2.29	1.35	2.30	1.71	1.78	1.28	1.78	1.61
CD14	Edmonton-West	1.33	1.11	2.19	1.23	2.42	1.70	1.65	1.11	1.83	1.52
CD15A	NorthPeace	1.28	1.05	1.51	1.31	1.64	1.38	1.18	1.24	1.29	1.31
CD15B	SouthPeace	1.35	1.14	1.89	1.43	2.04	1.57	1.4	1.25	1.51	1.37

Table 11a: Significance of the rotation, tillage and scenario effects on wind erosion rates (t/ha). Means in the same row with the same letter are not significantly different according to Duncan's multiple range test at P = 0.05.

Rotation	WW	WF	WiF	CWF
Mean	2.60a	3.64b	0.98c	4.09b
Scenario	SN_{tp}	SN_t	BL	
Mean	2.55a	2.84b	3.09b	
Tillage	NT	CT		
Mean	2.00a	3.66b		

WW = Continuous spring wheat
WF = Spring wheat - fallow rotation
CWF = Canola- wheat - fallow rotation
WiF = Winter wheat - fallow rotation
NT = No-till
CT = Conventional tillage

Table 11b: Wind erosion statistics (t/ha/yr) for spring wheat, winter wheat and canola rotations and tillage practices under climate at current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Rotations		CW		WF		CWF		WiF	
		NT	CT	NT	CT	NT	CT	NT	CT
Mean									
	BL	2.72	3.25	1.85	5.33	3.34	4.87	1.59	1.75
	SN_t	2.25	2.89	1.63	5.93	3.14	5.13	0.82	0.91
	SN_{tp}	1.93	2.50	1.33	5.81	2.94	5.07	0.37	0.45
Maximum									
	BL	34.60	43.55	20.49	66.72	35.55	54.97	13.74	14.36
	SN_t	19.95	29.96	13.68	71.08	29.73	53.69	6.09	6.84
	SN_{tp}	17.30	27.23	12.60	50.82	26.64	51.76	4.61	5.73
Minimum									
	BL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SN_t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SN_{tp}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation									
	BL	4.96	6.09	3.24	9.78	5.94	8.36	2.44	2.95
	SN_t	3.40	4.88	2.44	10.78	5.06	8.38	1.36	1.47
	SN_{tp}	2.98	4.15	2.14	7.83	4.85	8.27	0.74	0.87

Table 12a: Annual wind erosion (t/ha) from continuous wheat averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	6.84	7.93	5.05	6.68	4.06	5.36	0.74	0.84	0.59	0.68
CD2	Lethbridge/Brooks	13.75	16.83	9.03	12.96	7.94	11.16	0.66	0.77	0.58	0.66
CD3	Claresholm/Cardston	11.57	14.19	8.19	11.97	6.10	9.21	0.71	0.84	0.53	0.65
CD4	Hanna/Empress	3.93	4.75	5.26	6.35	4.95	5.75	1.34	1.34	1.26	1.21
CD5	Drummheller/Vulcan	5.31	6.22	3.76	4.86	3.74	4.53	0.71	0.78	0.70	0.73
CD6	Calgary/Olds	2.65	3.12	1.73	2.23	1.75	2.12	0.65	0.71	0.66	0.68
CD7	Stettler/Wainwright	1.40	1.69	1.85	2.03	1.80	2.04	1.32	1.20	1.29	1.21
CD8	RedDeer	0.31	0.35	0.27	0.34	0.28	0.32	0.88	0.97	0.90	0.91
CD9	RockyMountain-region	0.88	1.06	0.78	1.06	0.60	0.86	0.89	0.99	0.68	0.81
CD10	Camrose/Vermilion	0.57	0.61	0.56	0.47	0.37	0.43	0.98	0.78	0.65	0.70
CD11	Edmonton	0.55	0.59	0.43	0.53	0.40	0.51	0.79	0.91	0.73	0.87
CD12	LacLaBiche/StPaul	0.43	0.47	0.57	0.49	0.32	0.37	1.32	1.04	0.73	0.79
CD13	Barrhead/Athabasca	0.40	0.45	0.56	0.52	0.38	0.46	1.40	1.15	0.95	1.01
CD14	Edmonton-West	0.33	0.38	0.31	0.30	0.24	0.29	0.94	0.79	0.75	0.75
CD15A	NorthPeace	0.20	0.20	0.19	0.22	0.15	0.18	0.96	1.06	0.74	0.91
CD15B	SouthPeace	1.04	1.21	0.92	0.94	0.73	0.88	0.89	0.77	0.70	0.73

Table 12b: Annual wind erosion (t/ha) from wheat-fallow averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	4.75	13.52	3.72	14.58	2.62	14.00	0.78	1.08	0.55	1.04
CD2	Lethbridge/Brooks	9.15	26.78	6.36	29.44	5.72	28.91	0.70	1.10	0.63	1.08
CD3	Claresholm/Cardston	7.98	24.22	6.26	26.73	4.99	24.41	0.78	1.10	0.62	1.01
CD4	Hanna/Empress	2.82	8.30	3.62	11.03	3.11	11.07	1.29	1.33	1.10	1.33
CD5	Drummheller/Vulcan	3.49	9.99	2.71	10.38	2.39	10.58	0.78	1.04	0.69	1.06
CD6	Calgary/Olds	1.66	4.76	1.18	4.60	1.12	4.83	0.71	0.97	0.68	1.01
CD7	Stettler/Wainwright	0.92	3.17	1.26	3.58	1.17	3.80	1.37	1.13	1.28	1.20
CD8	RedDeer	0.23	0.55	0.25	0.53	0.18	0.48	1.11	0.96	0.78	0.87
CD9	RockyMountain-region	0.60	1.79	0.57	1.99	0.41	1.73	0.95	1.11	0.69	0.96
CD10	Camrose/Vermilion	0.41	0.94	0.44	0.89	0.28	0.92	1.05	0.95	0.68	0.99
CD11	Edmonton	0.32	1.08	0.29	1.01	0.29	1.17	0.91	0.93	0.90	1.08
CD12	LacLaBiche/StPaul	0.30	0.74	0.45	1.00	0.23	1.00	1.51	1.34	0.78	1.34
CD13	Barrhead/Athabasca	0.26	0.76	0.45	1.02	0.29	1.05	1.71	1.35	1.09	1.38
CD14	Edmonton-West	0.22	0.50	0.23	0.44	0.17	0.46	1.05	0.88	0.76	0.91
CD15A	NorthPeace	0.13	0.26	0.14	0.36	0.11	0.34	1.06	1.38	0.85	1.32
CD15B	SouthPeace	0.70	1.61	0.68	1.46	0.52	1.53	0.98	0.91	0.75	0.95

Table 12c: Annual wind erosion (t/ha) from canola-wheat-fallow averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	10.14	13.02	8.63	13.4	7.99	12.95	0.85	1.03	0.79	0.99
CD2	Lethbridge/Brooks	16.77	23.7	14.3	23.48	13.65	23.3	0.85	0.99	0.81	0.98
CD3	Claresholm/Cardston	13.9	19.96	12.14	20.49	11.03	18.69	0.87	1.03	0.79	0.94
CD4	Hanna/Empress	6.31	8.82	6.65	9.81	6.11	9.97	1.05	1.11	0.97	1.13
CD5	Drummheller/Vulcan	5.71	8.55	5.68	9.09	5.42	9.20	1.00	1.06	0.95	1.08
CD6	Calgary/Olds	2.46	4.19	2.30	4.15	2.39	4.40	0.94	0.99	0.97	1.05
CD7	Stettler/Wainwright	1.61	2.88	1.88	3.16	2.20	3.63	1.17	1.10	1.37	1.26
CD8	RedDeer	0.27	0.52	0.36	0.54	0.28	0.53	1.31	1.03	1.03	1.01
CD9	RockyMountain-region	1.14	1.68	1.00	1.73	0.84	1.51	0.88	1.03	0.74	0.90
CD10	Camrose/Vermilion	0.43	0.88	0.63	1.10	0.54	1.10	1.44	1.26	1.25	1.25
CD11	Edmonton	0.36	0.80	0.55	1.26	0.56	1.39	1.53	1.59	1.57	1.75
CD12	LacLaBiche/StPaul	0.30	0.60	0.53	0.91	0.39	0.91	1.80	1.53	1.31	1.53
CD13	Barrhead/Athabasca	0.26	0.53	0.56	0.95	0.43	0.98	2.12	1.78	1.64	1.84
CD14	Edmonton-West	0.28	0.49	0.27	0.48	0.22	0.47	0.98	0.97	0.80	0.95
CD15A	NorthPeace	0.16	0.24	0.21	0.37	0.20	0.38	1.32	1.53	1.26	1.59
CD15B	SouthPeace	0.84	1.55	0.85	1.53	0.80	1.68	1.01	0.99	0.95	1.08

Table 12d: Annual wind erosion (t/ha) from winter wheat-fallow averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	3.79	4.34	2.30	2.44	0.50	0.58	0.61	0.56	0.13	0.13
CD2	Lethbridge/Brooks	5.18	7.18	2.87	3.29	1.57	1.91	0.55	0.46	0.30	0.27
CD3	Claresholm/Cardston	5.83	7.63	3.56	3.78	1.79	2.15	0.61	0.50	0.31	0.28
CD4	Hanna/Empress	4.34	3.94	1.46	1.79	0.76	0.96	0.34	0.45	0.18	0.24
CD5	Drummheller/Vulcan	2.43	2.83	1.18	1.26	0.51	0.63	0.49	0.44	0.21	0.22
CD6	Calgary/Olds	1.17	1.17	0.49	0.52	0.20	0.27	0.42	0.45	0.17	0.23
CD7	Stettler/Wainwright	1.42	1.23	0.46	0.51	0.26	0.35	0.33	0.42	0.18	0.29
CD8	RedDeer	0.20	0.18	0.16	0.17	0.02	0.04	0.78	0.96	0.12	0.23
CD9	RockyMountain-region	0.63	0.70	0.36	0.41	0.17	0.22	0.58	0.59	0.27	0.32
CD10	Camrose/Vermilion	0.32	0.27	0.28	0.29	0.10	0.12	0.90	1.05	0.32	0.43
CD11	Edmonton	0.33	0.27	0.10	0.11	0.06	0.09	0.31	0.40	0.19	0.33
CD12	LacLaBiche/StPaul	0.29	0.24	0.32	0.35	0.12	0.13	1.10	1.44	0.40	0.53
CD13	Barrhead/Athabasca	0.25	0.24	0.29	0.32	0.11	0.12	1.13	1.35	0.41	0.51
CD14	Edmonton-West	0.18	0.17	0.10	0.10	0.04	0.04	0.54	0.59	0.20	0.26
CD15A	NorthPeace	0.09	0.08	0.08	0.07	0.06	0.05	0.86	0.88	0.69	0.60
CD15B	SouthPeace	0.57	0.51	0.28	0.29	0.16	0.16	0.49	0.56	0.29	0.31

Table 13a: Significance of the rotation, tillage and scenario effects on water erosion rates (t/ha). Means in the same row with the same letter are not significantly different according to Duncan's multiple range test at P = 0.05.

Rotation	WW	WF	WiF	CWF
Mean	3.13a	5.41b	5.22b	2.75a
Scenario	SN_{tp}	SN_t	BL	
Mean	5.15a	3.78b	3.79b	
Tillage	NT	CT		
Mean	3.42a	4.82b		

WW = Continuous spring wheat
WF = Spring wheat - fallow rotation
WiF = Wheat - wheat - fallow rotation
CWF = canola yield under canola - wheat - fallow rotation
CWF = wheat yield under canola - wheat - fallow rotation
NT = No-till
CT = Conventional tillage

Table 13b: Water erosion statistics (t/ha/yr) for spring wheat, winter wheat and canola rotations and tillage practices under climate at current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Rotations		CW		WF		CWF		WiF	
		NT	CT	NT	CT	NT	CT	NT	CT
Mean									
	BL	2.53	2.96	3.11	6.55	2.55	2.81	4.48	5.28
	SN_t	2.30	2.62	2.78	5.86	2.49	2.58	4.19	4.64
	SN_{tp}	3.86	4.46	4.21	9.89	2.57	3.46	5.95	6.75
Maximum									
	BL	29.11	37.31	32.17	64.95	9.42	9.65	36.54	48.54
	SN_t	29.23	37.49	33.94	72.05	9.77	9.74	35.86	43.47
	SN_{tp}	38.13	49.33	44.72	77.90	9.33	9.99	47.43	57.18
Minimum									
	BL	0.00	0.01	0.01	0.02	0.24	0.38	0.00	0.01
	SN_t	0.00	0.00	0.01	0.02	0.15	0.34	0.01	0.00
	SN_{tp}	0.00	0.01	0.01	0.02	0.40	0.07	0.01	0.01
Standard deviation									
	BL	5.48	6.54	6.42	13.71	2.50	2.49	8.83	10.75
	SN_t	5.33	6.36	6.15	13.58	2.51	2.26	8.46	9.68
	SN_{tp}	7.81	9.52	8.45	15.16	2.28	2.69	11.41	13.42

Table 14a: Annual water erosion (t/ha) from continuous wheat averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	0.94	1.08	0.85	0.94	2.03	2.25	0.90	0.87	2.16	2.09
CD2	Lethbridge/Brooks	0.29	0.34	0.26	0.3	0.55	0.62	0.90	0.87	1.88	1.82
CD3	Claresholm/Cardston	6.32	7.66	5.95	6.94	9.86	11.92	0.94	0.91	1.56	1.56
CD4	Hanna/Empress	0.28	0.32	0.29	0.31	0.62	0.67	1.03	0.98	2.22	2.12
CD5	Drummheller/Vulcan	0.51	0.57	0.46	0.49	1.11	1.23	0.9	0.86	2.16	2.16
CD6	Calgary/Olds	4.38	5.28	4.39	5.30	6.34	7.80	1.00	1.00	1.45	1.48
CD7	Stettler/Wainwright	0.35	0.38	0.32	0.33	0.78	0.81	0.91	0.86	2.21	2.15
CD8	RedDeer	4.04	4.63	3.23	3.44	5.97	6.67	0.8	0.74	1.48	1.44
CD9	RockyMountain-region	6.93	8.25	6.14	7.32	9.06	11.03	0.89	0.89	1.31	1.34
CD10	Camrose/Vermilion	0.57	0.61	0.58	0.58	1.43	1.48	1.01	0.95	2.51	2.43
CD11	Edmonton	4.89	5.72	3.82	4.15	7.30	8.01	0.78	0.73	1.50	1.40
CD12	LacLaBiche/StPaul	0.64	0.73	0.75	0.80	1.63	1.75	1.18	1.1	2.56	2.41
CD13	Barrhead/Athabasca	2.09	2.43	1.71	1.86	2.93	3.23	0.82	0.77	1.4	1.33
CD14	Edmonton-West	4.87	5.63	3.47	3.78	5.76	6.41	0.71	0.67	1.18	1.14
CD15A	NorthPeace	0.3	0.33	0.33	0.36	0.51	0.55	1.1	1.08	1.68	1.65
CD15B	SouthPeace	1.3	1.49	1.06	1.15	1.64	1.81	0.81	0.77	1.26	1.22

Table 14b: Annual water erosion (t/ha) from wheat-fallow averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	1.17	3.05	1.08	2.52	2.32	5.49	0.92	0.83	1.98	1.80
CD2	Lethbridge/Brooks	0.36	0.99	0.33	0.86	0.64	1.71	0.90	0.86	1.75	1.72
CD3	Claresholm/Cardston	7.57	18.13	6.81	16.62	10.75	27.28	0.90	0.92	1.42	1.50
CD4	Hanna/Empress	0.39	0.99	0.40	0.91	0.83	1.93	1.03	0.92	2.11	1.95
CD5	Drummheller/Vulcan	0.74	1.57	0.66	1.42	1.32	3.24	0.89	0.91	1.77	2.06
CD6	Calgary/Olds	6.00	10.57	5.16	10.69	6.83	15.42	0.86	1.01	1.14	1.46
CD7	Stettler/Wainwright	0.48	0.93	0.44	0.76	0.91	1.82	0.91	0.82	1.88	1.95
CD8	RedDeer	4.94	9.74	3.87	7.57	6.44	14.47	0.78	0.78	1.30	1.49
CD9	RockyMountain-region	8.55	17.25	7.07	15.48	9.59	23.18	0.83	0.90	1.12	1.34
CD10	Camrose/Vermilion	0.84	1.48	0.83	1.35	1.59	3.11	0.99	0.91	1.88	2.10
CD11	Edmonton	6.06	12.13	5.03	9.56	7.79	18.54	0.83	0.79	1.29	1.53
CD12	LacLaBiche/StPaul	0.88	1.79	1.10	2.03	1.77	4.14	1.25	1.13	2.01	2.31
CD13	Barrhead/Athabasca	2.42	5.04	2.03	3.80	3.12	6.84	0.84	0.75	1.29	1.36
CD14	Edmonton-West	5.57	11.83	4.09	7.92	6.11	14.35	0.74	0.67	1.10	1.21
CD15A	NorthPeace	0.40	0.79	0.44	0.79	0.58	1.30	1.09	1.01	1.45	1.65
CD15B	SouthPeace	1.51	3.14	1.27	2.37	1.78	3.98	0.84	0.76	1.18	1.27

Table 14c: Annual water erosion (t/ha) from canola-wheat-fallow averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	1.67	2.15	1.68	2.17	2.67	2.65	1.00	1.01	1.60	1.23
CD2	Lethbridge/Brooks	0.94	1.41	1.02	1.48	1.48	2.16	1.09	1.05	1.57	1.53
CD3	Claresholm/Cardston	2.90	5.31	3.42	3.87	2.97	4.18	1.18	0.73	1.03	0.79
CD4	Hanna/Empress	1.35	1.78	1.34	1.67	1.97	2.67	0.99	0.94	1.46	1.50
CD5	Drummheller/Vulcan	1.29	1.63	1.30	1.56	1.98	2.63	1.01	0.96	1.54	1.62
CD6	Calgary/Olds	1.85	2.38	1.82	2.00	2.65	2.30	0.99	0.84	1.44	0.96
CD7	Stettler/Wainwright	2.25	3.05	2.31	3.01	2.61	4.89	1.02	0.99	1.16	1.60
CD8	RedDeer	3.42	3.34	3.36	3.31	2.85	4.68	0.98	0.99	0.83	1.40
CD9	RockyMountain-region	3.90	3.38	3.48	3.04	2.83	4.67	0.89	0.90	0.73	1.38
CD10	Camrose/Vermilion	2.18	2.89	2.36	3.07	3.53	3.66	1.08	1.06	1.62	1.27
CD11	Edmonton	3.58	3.88	3.35	3.68	3.14	4.76	0.93	0.95	0.88	1.23
CD12	LacLaBiche/StPaul	1.20	1.59	1.66	2.14	2.31	2.23	1.38	1.34	1.92	1.40
CD13	Barrhead/Athabasca	3.08	2.96	2.72	2.85	2.10	3.73	0.88	0.96	0.68	1.26
CD14	Edmonton-West	6.93	4.20	5.32	3.20	1.71	4.89	0.77	0.76	0.25	1.16
CD15A	NorthPeace	0.82	1.09	0.91	0.95	0.99	1.24	1.12	0.87	1.21	1.14
CD15B	SouthPeace	2.21	2.94	1.71	1.85	1.74	2.34	0.78	0.63	0.79	0.80

Table 14d: Annual water erosion (t/ha) from winter wheat-fallow averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	0.25	0.27	0.25	0.24	0.67	0.66	1.00	0.88	2.64	2.40
CD2	Lethbridge/Brooks	0.58	0.64	0.54	0.58	1.04	1.12	0.94	0.90	1.80	1.75
CD3	Claresholm/Cardston	12.43	14.62	11.76	13.39	17.78	20.73	0.95	0.92	1.43	1.42
CD4	Hanna/Empress	0.24	0.25	0.24	0.24	0.52	0.52	1.01	0.95	2.16	2.04
CD5	Drummheller/Vulcan	0.66	0.71	0.62	0.66	1.10	1.20	0.94	0.93	1.66	1.68
CD6	Calgary/Olds	7.09	8.42	6.92	8.15	9.40	11.32	0.98	0.97	1.33	1.34
CD7	Stettler/Wainwright	0.81	0.83	0.76	0.77	1.52	1.53	0.94	0.93	1.87	1.85
CD8	RedDeer	5.71	6.20	4.88	5.22	7.63	8.44	0.85	0.84	1.34	1.36
CD9	RockyMountain-region	11.8	13.81	10.56	12.17	14.24	16.86	0.89	0.88	1.21	1.22
CD10	Camrose/Vermilion	0.86	0.87	0.87	0.86	1.60	1.61	1.01	0.98	1.86	1.85
CD11	Edmonton	5.39	5.88	4.34	4.62	6.51	7.06	0.80	0.78	1.21	1.20
CD12	LacLaBiche/StPaul	0.94	1.22	1.25	1.29	1.69	1.79	1.33	1.06	1.80	1.46
CD13	Barrhead/Athabasca	5.97	7.66	5.57	5.94	7.89	8.67	0.93	0.78	1.32	1.13
CD14	Edmonton-West	15.56	18.00	13.72	15.05	18.98	21.32	0.88	0.84	1.22	1.18
CD15A	NorthPeace	0.57	0.79	0.62	0.64	0.78	0.82	1.07	0.81	1.36	1.04
CD15B	SouthPeace	2.87	3.63	2.67	2.84	3.61	3.97	0.93	0.78	1.26	1.09

Table 16a: Annual continuous wheat yield (t/ha) averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	1.25	1.25	1.73	1.71	1.95	1.95	1.38	1.37	1.56	1.56
CD2	Lethbridge/Brooks	1.28	1.27	1.71	1.70	1.90	1.88	1.34	1.33	1.48	1.48
CD3	Claresholm/Cardston	1.46	1.42	2.00	1.96	1.99	1.97	1.37	1.38	1.36	1.39
CD4	Hanna/Empress	1.25	1.26	1.65	1.63	1.80	1.81	1.33	1.29	1.45	1.44
CD5	Drummheller/Vulcan	1.50	1.52	1.99	1.98	2.05	2.06	1.32	1.30	1.36	1.35
CD6	Calgary/Olds	1.49	1.51	2.04	2.06	2.03	2.04	1.37	1.36	1.36	1.35
CD7	Stettler/Wainwright	1.58	1.58	2.01	2.01	2.03	2.05	1.28	1.27	1.29	1.30
CD8	RedDeer	1.48	1.48	1.85	1.85	1.84	1.85	1.25	1.25	1.25	1.24
CD9	RockyMountain-region	1.24	1.24	1.67	1.67	1.65	1.64	1.34	1.34	1.33	1.32
CD10	Camrose/Vermilion	1.78	1.79	2.29	2.30	2.29	2.31	1.28	1.28	1.28	1.29
CD11	Edmonton	1.56	1.56	1.92	1.91	1.91	1.92	1.23	1.23	1.23	1.23
CD12	LacLaBiche/StPaul	1.41	1.41	1.64	1.65	1.66	1.66	1.17	1.17	1.18	1.18
CD13	Barrhead/Athabasca	1.42	1.41	1.67	1.66	1.69	1.68	1.17	1.18	1.19	1.19
CD14	Edmonton-West	1.35	1.35	1.63	1.63	1.64	1.63	1.21	1.20	1.21	1.21
CD15A	NorthPeace	1.40	1.41	1.66	1.68	1.68	1.71	1.19	1.19	1.20	1.21
CD15B	SouthPeace	1.48	1.48	1.79	1.79	1.79	1.79	1.21	1.21	1.21	1.21

Table 16b: Annual wheat yield (t/ha) from wheat-fallow averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	1.95	1.93	2.61	2.55	2.67	2.66	1.34	1.32	1.37	1.38
CD2	Lethbridge/Brooks	1.89	1.89	2.48	2.38	2.48	2.39	1.31	1.26	1.31	1.27
CD3	Claresholm/Cardston	1.97	1.86	2.62	2.47	2.44	2.27	1.33	1.33	1.24	1.22
CD4	Hanna/Empress	1.84	1.87	2.36	2.34	2.40	2.40	1.28	1.26	1.30	1.29
CD5	Drummheller/Vulcan	2.19	2.21	2.72	2.73	2.64	2.64	1.24	1.23	1.20	1.20
CD6	Calgary/Olds	2.08	2.10	2.73	2.76	2.57	2.58	1.31	1.32	1.23	1.23
CD7	Stettler/Wainwright	2.24	2.28	2.72	2.77	2.56	2.62	1.21	1.22	1.14	1.15
CD8	RedDeer	1.99	2.01	2.43	2.45	2.27	2.27	1.22	1.22	1.14	1.13
CD9	RockyMountain-region	1.54	1.52	2.14	2.12	1.98	1.93	1.39	1.40	1.28	1.27
CD10	Camrose/Vermilion	2.56	2.62	3.06	3.12	2.86	2.93	1.20	1.19	1.12	1.12
CD11	Edmonton	2.14	2.15	2.51	2.52	2.36	2.36	1.17	1.17	1.10	1.10
CD12	LacLaBiche/StPaul	1.83	1.86	2.19	2.22	2.07	2.09	1.19	1.19	1.13	1.12
CD13	Barrhead/Athabasca	1.82	1.84	2.18	2.20	2.03	2.05	1.20	1.19	1.11	1.11
CD14	Edmonton-West	1.71	1.70	2.12	2.13	1.99	1.99	1.24	1.25	1.16	1.17
CD15A	NorthPeace	1.87	1.92	2.26	2.31	2.19	2.22	1.21	1.20	1.17	1.16
CD15B	SouthPeace	1.94	1.97	2.35	2.38	2.2	2.23	1.21	1.21	1.13	1.13

Table 16c: Annual canola yield (t/ha) from canola-wheat-fallow averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t)

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	1.61	1.60	2.24	1.96	1.97	1.67	1.39	1.23	1.22	1.04
CD2	Lethbridge/Brooks	1.85	1.76	2.15	1.95	2.02	1.72	1.17	1.11	1.09	0.98
CD3	Claresholm/Cardston	1.57	1.42	2.45	2.14	2.10	1.86	1.56	1.50	1.34	1.31
CD4	Hanna/Empress	1.93	1.73	2.56	2.22	2.22	1.87	1.33	1.28	1.15	1.08
CD5	Drummheller/Vulcan	2.54	2.26	2.70	2.46	2.3	1.88	1.06	1.09	0.91	0.83
CD6	Calgary/Olds	1.95	1.68	2.74	2.57	2.17	1.82	1.41	1.53	1.11	1.09
CD7	Stettler/Wainwright	2.71	2.29	2.78	2.28	1.97	1.39	1.03	0.99	0.73	0.61
CD8	RedDeer	2.27	1.85	2.46	2.08	2.11	1.39	1.09	1.12	0.93	0.75
CD9	RockyMountain-region	1.04	0.91	2.02	1.67	1.75	1.29	1.94	1.83	1.68	1.41
CD10	Camrose/Vermilion	3.07	2.58	2.76	2.09	2.14	1.50	0.90	0.81	0.70	0.58
CD11	Edmonton	3.06	2.56	3.02	2.36	2.15	1.49	0.99	0.92	0.70	0.58
CD12	LacLaBiche/StPaul	2.71	2.21	2.98	2.38	2.14	1.54	1.10	1.08	0.79	0.70
CD13	Barrhead/Athabasca	2.73	2.22	3.08	2.33	2.04	1.40	1.13	1.05	0.75	0.63
CD14	Edmonton-West	1.36	1.13	2.61	1.77	2.01	1.21	1.92	1.57	1.48	1.07
CD15A	NorthPeace	2.27	1.80	2.79	2.27	2.23	1.73	1.23	1.26	0.98	0.96
CD15B	SouthPeace	2.11	1.63	2.82	2.11	2.11	1.47	1.34	1.29	1.00	0.90

Table 16d: Annual wheat yield (t/ha) from canola-wheat-fallow averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	2.48	2.38	3.44	3.25	4.05	4.02	1.39	1.36	1.63	1.69
CD2	Lethbridge/Brooks	2.49	2.35	3.50	3.29	4.07	3.98	1.40	1.40	1.63	1.69
CD3	Claresholm/Cardston	3.07	2.93	4.71	4.58	4.84	4.76	1.53	1.56	1.58	1.62
CD4	Hanna/Empress	2.53	2.41	3.37	3.21	4.04	3.98	1.33	1.33	1.59	1.65
CD5	Drummheller/Vulcan	3.39	3.28	4.13	4.06	4.38	4.34	1.22	1.24	1.29	1.32
CD6	Calgary/Olds	3.49	3.44	4.92	4.94	4.99	4.95	1.41	1.43	1.43	1.44
CD7	Stettler/Wainwright	3.75	3.65	4.33	4.24	4.36	4.30	1.15	1.16	1.16	1.18
CD8	RedDeer	3.91	3.89	4.82	4.72	4.88	4.73	1.23	1.21	1.25	1.22
CD9	RockyMountain-region	2.86	2.84	4.86	4.79	5.03	4.94	1.70	1.69	1.76	1.74
CD10	Camrose/Vermilion	4.07	3.97	4.45	4.39	4.46	4.36	1.09	1.11	1.10	1.10
CD11	Edmonton	4.28	4.21	4.82	4.65	4.73	4.61	1.13	1.11	1.11	1.10
CD12	LacLaBiche/StPaul	3.83	3.72	4.43	4.35	4.30	4.22	1.16	1.17	1.12	1.13
CD13	Barrhead/Athabasca	4.06	3.96	4.81	4.69	4.66	4.59	1.18	1.18	1.15	1.16
CD14	Edmonton-West	3.40	3.36	4.84	4.69	4.83	4.73	1.42	1.40	1.42	1.41
CD15A	NorthPeace	3.46	3.36	4.19	4.14	4.08	4.05	1.21	1.23	1.18	1.21
CD15B	SouthPeace	3.74	3.66	4.64	4.57	4.63	4.52	1.24	1.25	1.24	1.24

Table 16e: Annual winter wheat yield (t/ha) from winter wheat-fallow averaged by Crop Reporting Districts in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

	Crop Reporting Districts	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD1	MedicineHat/Foremost	2.70	1.82	2.77	1.95	2.8	2.10	1.03	1.07	1.04	1.15
CD2	Lethbridge/Brooks	2.90	1.78	2.68	1.86	2.79	1.95	0.92	1.05	0.96	1.10
CD3	Claresholm/Cardston	2.52	1.93	2.73	2.00	2.86	2.01	1.09	1.03	1.13	1.04
CD4	Hanna/Empress	1.94	1.88	3.45	1.93	3.00	2.18	1.78	1.03	1.55	1.16
CD5	Drummheller/Vulcan	2.81	2.26	2.68	2.12	2.71	2.18	0.95	0.94	0.97	0.97
CD6	Calgary/Olds	2.83	2.62	2.88	2.19	2.87	2.33	1.02	0.83	1.02	0.89
CD7	Stettler/Wainwright	2.38	2.41	3.05	2.23	2.83	2.28	1.28	0.93	1.19	0.94
CD8	RedDeer	2.54	2.26	3.02	2.21	3.07	2.33	1.19	0.98	1.21	1.03
CD9	RockyMountain-region	2.06	1.98	3.51	2.49	3.58	2.82	1.71	1.26	1.74	1.43
CD10	Camrose/Vermilion	2.77	2.78	3.51	2.60	3.17	2.70	1.27	0.94	1.14	0.97
CD11	Edmonton	2.38	2.32	2.85	2.14	3.00	2.36	1.20	0.92	1.26	1.02
CD12	LacLaBiche/StPaul	2.13	2.08	3.55	2.79	3.34	2.80	1.67	1.34	1.57	1.35
CD13	Barrhead/Athabasca	2.25	2.09	4.00	2.62	3.85	3.13	1.78	1.25	1.71	1.50
CD14	Edmonton-West	2.24	2.15	3.81	2.40	4.04	3.11	1.70	1.12	1.80	1.45
CD15A	NorthPeace	2.25	2.16	2.58	2.49	2.61	2.44	1.15	1.15	1.16	1.13
CD15B	SouthPeace	2.33	2.22	3.31	2.79	3.38	2.86	1.42	1.25	1.45	1.29

APPENDIX A

EPIC model outputs by weather grid points

Appendix A-1a: Annual wind erosion (t/ha) from continuous wheat averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	2.22	2.48	2.99	3.46	1.49	2.42	1.35	1.4	0.67	0.98
BC59	1.43	1.87	1.83	2.61	1.64	2.58	1.28	1.4	1.15	1.38
BC69	1.18	1.23	1.71	2.44	1.83	2.6	1.45	1.98	1.55	2.11
BC79	0.69	0.94	0.81	1.15	0.52	0.84	1.17	1.22	0.75	0.89
BC89	0.81	0.93	0.78	1.22	1	1.23	0.96	1.31	1.23	1.32
BC99	0.45	0.46	0.19	0.27	0.26	0.32	0.42	0.59	0.58	0.7
BD31	5.92	7.24	6.65	8.65	3.49	5.44	1.12	1.19	0.59	0.75
BD33	8.23	9.85	7.95	9.43	4.75	6.35	0.97	0.96	0.58	0.64
BD35	14.38	18.31	10.91	14.82	9.56	12.58	0.76	0.81	0.66	0.69
BD37	10.84	13.12	7.54	9.79	4.29	5.96	0.7	0.75	0.4	0.45
BD39	7.64	7.88	3.83	4.85	2.55	3.51	0.5	0.62	0.33	0.45
BD41	6.81	7.89	5.85	7.56	2.89	4.23	0.86	0.96	0.42	0.54
BD43	28.55	34.48	16.76	28.66	12.82	22.32	0.59	0.83	0.45	0.65
BD45	34.6	43.55	19.95	29.96	17.3	27.23	0.58	0.69	0.5	0.63
BD47	9.24	11.95	5.53	8.21	5.9	6.98	0.6	0.69	0.64	0.58
BD49	4.69	5.46	3.55	4.54	2.59	3.88	0.76	0.83	0.55	0.71
BD51	2.55	4.1	1.94	3.04	1.49	2.66	0.76	0.74	0.58	0.65
BD53	20.51	25.06	11.4	19.92	10.01	15.47	0.56	0.79	0.49	0.62
BD55	10.16	12.07	6.82	9.09	6.17	8.75	0.67	0.75	0.61	0.72
BD57	11.83	14.58	7.01	11.62	8.54	12.18	0.59	0.8	0.72	0.84
BD59	6.11	5.89	4.08	5.18	2.59	3.89	0.67	0.88	0.42	0.66
BD61	1.75	2.28	0.92	1.21	0.95	1.05	0.53	0.53	0.54	0.46
BD63	12.21	13.98	5.69	7.45	8.88	10.23	0.47	0.53	0.73	0.73
BD65	5.03	5.47	2.57	3.32	3	3.62	0.51	0.61	0.6	0.66
BD67	7.31	7.87	5.27	5.99	3.94	4.16	0.72	0.76	0.54	0.53
BD69	7.99	9.18	7.1	9.54	6.26	7.31	0.89	1.04	0.78	0.8
BD71	3.3	4.05	1.88	2.19	1.99	2.49	0.57	0.54	0.6	0.61
BD73	9.26	10.95	5.24	6.68	6.12	7.63	0.57	0.61	0.66	0.7
BD75	4.19	4.91	2.76	3.74	2.68	3.62	0.66	0.76	0.64	0.74
BD77	13.01	16.84	14.34	17.55	13.38	14.9	1.1	1.04	1.03	0.88
BD79	4.41	4.84	4.85	5.48	3.26	3.76	1.1	1.13	0.74	0.78
BD81	2.03	2.2	1.52	1.62	1.21	1.54	0.75	0.74	0.6	0.7
BD83	7.34	8.32	5.77	7.3	4.83	3.75	0.79	0.88	0.66	0.45
BD85	1.94	2.31	2.68	2.88	2.24	2.73	1.38	1.25	1.15	1.18
BD87	2.28	2.87	4.08	4.79	3.71	5.13	1.79	1.67	1.63	1.79
BD89	2.21	2.58	3.33	4.71	4.52	5	1.51	1.83	2.05	1.94
BD91	1.02	1.09	0.99	1.07	0.33	0.28	0.97	0.98	0.32	0.26
BD93	0.71	0.74	0.91	1.31	1.04	1.18	1.28	1.77	1.46	1.59
BD95	1.72	1.9	2.8	2.53	1.64	2.39	1.63	1.33	0.95	1.26
BD97	2.02	2.6	3.25	3.48	3.04	3.44	1.61	1.34	1.5	1.32
BD99	2.42	3.19	4.71	5.55	4.2	5.27	1.95	1.74	1.74	1.65
BE31	5.59	6.45	5.15	6.62	3.14	4.29	0.92	1.03	0.56	0.67
BE41	4.38	5.9	5.71	7	5.28	6.23	1.3	1.19	1.21	1.06
BE51	5.09	5.69	2.96	3.98	2.9	3.92	0.58	0.7	0.57	0.69
BE61	3.66	4.26	3.81	4.73	2.58	3.56	1.04	1.11	0.7	0.84
BE71	4.26	4.74	3.84	5.32	3.74	4.36	0.9	1.12	0.88	0.92
BE81	2.48	2.75	4.21	5.71	4.34	5.19	1.7	2.08	1.75	1.89
BE91	5.5	7.55	9.97	11.57	10.98	11.87	1.81	1.53	2	1.57
CB77	1.45	1.73	1.14	1.39	1.31	1.66	0.79	0.8	0.9	0.96
CB79	1.81	2.09	2.35	1.86	1.46	1.67	1.3	0.89	0.81	0.8
CB87	2.78	3.22	1.89	1.97	1.9	1.59	0.68	0.61	0.68	0.49
CB89	3.08	3.49	2.05	2.23	1.56	1.94	0.67	0.64	0.51	0.56
CB97	3.18	4.01	3.15	3.01	2.13	2.74	0.99	0.75	0.67	0.68
CB99	2.54	2.92	1.68	1.62	1.32	1.87	0.66	0.55	0.52	0.64
CC17	0.02	0.02	0.04	0.04	0.01	0.04	2	2	0.5	2

Appendix A-1a (Continued):

Weather grid	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	0.02	0.03	0.04	0.04	0.04	0.04	2	1.33	2	1.33
CC25	0	0	0	0	0	0	0	0	0	0
CC27	0	0.01	0	0	0.04	0.05	0	0	0	5
CC29	0	0	0.01	0.01	0.04	0.04	0	0	0	0
CC35	0	0	0.01	0.01	0	0	0	0	0	0
CC37	0.02	0.03	0.01	0.02	0.01	0.01	0.5	0.67	0.5	0.33
CC39	0.07	0.11	0.17	0.23	0.11	0.17	2.43	2.09	1.57	1.55
CC43	0	0	0	0	0	0	0	0	0	0
CC45	0	0	0	0	0	0	0	0	0	0
CC47	0	0	0	0	0	0	0	0	0	0
CC49	0.42	0.46	0.2	0.25	0.17	0.23	0.48	0.54	0.4	0.5
CC53	0.01	0.01	0	0	0	0.01	0	0	0	1
CC55	0	0	0	0	0	0	0	0	0	0
CC57	0	0	0	0	0	0	0	0	0	0
CC59	0.14	0.15	0.16	0.14	0.24	0.26	1.14	0.93	1.71	1.73
CC65	0.02	0.02	0.02	0.02	0.01	0.01	1	1	0.5	0.5
CC67	0	0	0	0.01	0	0	0	0	0	0
CC69	0.31	0.39	0.34	0.45	0.47	0.56	1.1	1.15	1.52	1.44
CC77	0.03	0.04	0.1	0.13	0.06	0.11	3.33	3.25	2	2.75
CC79	0.21	0.24	0.3	0.42	0.3	0.41	1.43	1.75	1.43	1.71
CC87	0.33	0.51	0.57	0.64	0.63	0.7	1.73	1.25	1.91	1.37
CC89	0.3	0.33	0.45	0.48	0.17	0.26	1.5	1.45	0.57	0.79
CC97	0.48	0.57	0.26	0.35	0.22	0.32	0.54	0.61	0.46	0.56
CD11	0.74	0.79	0.74	0.97	0.47	0.55	1	1.23	0.64	0.7
CD13	0.37	0.5	0.25	0.4	0.42	0.53	0.68	0.8	1.14	1.06
CD15	0.98	1.38	1.37	1.5	1.78	1.97	1.4	1.09	1.82	1.43
CD17	1.59	2.07	2.52	3.17	3.46	3.52	1.58	1.53	2.18	1.7
CD19	1.71	2.01	2.44	3.05	2.5	2.68	1.43	1.52	1.46	1.33
CD21	0.21	0.25	0.2	0.22	0.29	0.29	0.95	0.88	1.38	1.16
CD23	0.36	0.34	0.13	0.16	0.14	0.19	0.36	0.47	0.39	0.56
CD25	0.56	0.56	0.21	0.32	0.28	0.33	0.38	0.57	0.5	0.59
CD27	0.83	1.09	0.92	0.84	1.47	1.64	1.11	0.77	1.77	1.5
CD29	1.12	1.46	1.39	1.57	1.32	1.72	1.24	1.08	1.18	1.18
CD31	0.45	0.48	0.14	0.2	0.61	0.68	0.31	0.42	1.36	1.42
CD33	0.44	0.46	0.31	0.35	0.37	0.35	0.7	0.76	0.84	0.76
CD35	0.3	0.29	0.21	0.26	0.27	0.35	0.7	0.9	0.9	1.21
CD37	0.53	0.57	0.66	0.59	0.37	0.47	1.25	1.04	0.7	0.82
CD39	0.56	0.61	0.53	0.55	0.48	0.42	0.95	0.9	0.86	0.69
CD41	0.26	0.32	0.08	0.1	0.15	0.2	0.31	0.31	0.58	0.63
CD43	0.49	0.64	0.4	0.45	0.25	0.32	0.82	0.7	0.51	0.5
CD45	0.21	0.21	0.23	0.12	0.08	0.11	1.1	0.57	0.38	0.52
CD47	0.27	0.28	0.69	0.39	0.17	0.15	2.56	1.39	0.63	0.54
CD49	0.08	0.1	0.12	0.08	0.08	0.09	1.5	0.8	1	0.9
CD51	0.58	0.65	0.22	0.41	0.29	0.43	0.38	0.63	0.5	0.66
CD53	2.84	2.81	2.78	3.58	2.13	2.81	0.98	1.27	0.75	1
CD55	0.31	0.32	0.31	0.3	0.28	0.31	1	0.94	0.9	0.97
CD57	2.41	2.52	2.19	1.23	0.89	0.98	0.91	0.49	0.37	0.39
CD59	0.48	0.46	0.59	0.61	0.47	0.47	1.23	1.33	0.98	1.02
CD61	0.37	0.36	0.2	0.21	0.39	0.51	0.54	0.58	1.05	1.42
CD63	0.74	0.86	0.75	0.52	0.4	0.49	1.01	0.6	0.54	0.57
CD67	0.18	0.24	0.34	0.24	0.23	0.29	1.89	1	1.28	1.21
CD69	2.22	2.35	1.37	1.05	0.72	0.85	0.62	0.45	0.32	0.36
CD71	0.4	0.47	1.05	0.81	0.66	0.72	2.63	1.72	1.65	1.53
CD73	0.88	0.96	1.84	1.28	1.01	1.04	2.09	1.33	1.15	1.08
CD77	0.01	0.01	0.02	0.02	0	0	2	2	0	0
CD79	0.67	0.89	2.49	1.78	0.74	0.88	3.72	2	1.1	0.99
CD81	0.66	0.73	0.82	0.93	0.48	0.58	1.24	1.27	0.73	0.79

Appendix A-1a (Continued):

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	0.35	0.41	0.55	0.4	0.26	0.34	1.57	0.98	0.74	0.83
CD85	0.01	0.01	0	0	0	0	0	0	0	0
CE11	7.74	8.71	11.99	12.27	8.65	9.91	1.55	1.41	1.12	1.14
CE21	1.47	1.79	0.88	0.99	0.72	0.94	0.6	0.55	0.49	0.53
CE31	0.53	0.57	0.45	0.44	0.4	0.48	0.85	0.77	0.75	0.84
CE41	0.3	0.28	0.15	0.17	0.14	0.22	0.5	0.61	0.47	0.79
CE51	0.45	0.52	0.46	0.53	0.41	0.49	1.02	1.02	0.91	0.94
CE61	0.56	0.64	0.51	0.54	0.6	0.6	0.91	0.84	1.07	0.94
CE71	1.22	1.19	0.86	1	1.01	1.12	0.7	0.84	0.83	0.94
DB15	0.32	0.45	0.26	0.43	0.4	0.6	0.81	0.96	1.25	1.33
DB17	0.58	0.75	0.43	0.58	0.57	0.77	0.74	0.77	0.98	1.03
DB19	0.38	0.39	0.15	0.24	0.22	0.3	0.39	0.62	0.58	0.77
DB25	0.21	0.24	0.16	0.22	0.22	0.3	0.76	0.92	1.05	1.25
DB27	0.31	0.32	0.26	0.31	0.24	0.25	0.84	0.97	0.77	0.78
DB29	0.35	0.32	0.16	0.19	0.25	0.29	0.46	0.59	0.71	0.91
DC11	0.59	0.67	0.51	0.6	0.52	0.64	0.86	0.9	0.88	0.96
DC13	0.22	0.23	0.28	0.34	0.22	0.33	1.27	1.48	1	1.43
DC21	0.14	0.13	0.12	0.14	0.09	0.12	0.86	1.08	0.64	0.92
DC23	0.61	0.59	0.46	0.52	0.28	0.37	0.75	0.88	0.46	0.63
DC31	0.25	0.23	0.34	0.39	0.24	0.28	1.36	1.7	0.96	1.22
DC33	0.35	0.31	0.47	0.5	0.25	0.29	1.34	1.61	0.71	0.94
DC71	0	0	0	0	0	0	0	0	0	0
DC73	0	0	0	0	0	0	0	0	0	0
DC75	0	0	0.01	0.01	0	0.01	0	0	0	0

Appendix A-1b: Annual wind erosion (t/ha) from wheat-fallow averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	1.43	5.47	2.08	6.24	1.26	5.54	1.45	1.14	0.88	1.01
BC59	0.81	3.18	1.15	4.18	0.93	3.27	1.41	1.32	1.14	1.03
BC69	0.61	2.72	0.97	2.86	0.88	2.49	1.6	1.05	1.45	0.92
BC79	0.32	0.65	0.37	0.92	0.36	0.75	1.16	1.42	1.13	1.16
BC89	0.66	1.97	0.49	2.03	0.58	2.13	0.75	1.03	0.89	1.08
BC99	0.27	0.45	0.1	0.41	0.17	0.37	0.36	0.91	0.62	0.82
BD31	4.59	14.74	5.91	17.9	3.53	13.64	1.29	1.21	0.77	0.93
BD33	6.51	18.69	6.71	20.27	4.4	18.68	1.03	1.08	0.68	1
BD35	10.51	30.09	8.05	32.68	7.25	30.91	0.77	1.09	0.69	1.03
BD37	8.11	23.44	5.65	25.8	2.68	21.87	0.7	1.1	0.33	0.93
BD39	5.2	10.75	3.63	10.54	1.71	9.77	0.7	0.98	0.33	0.91
BD41	5.64	13.07	4.98	15.2	2.17	10.52	0.88	1.16	0.38	0.8
BD43	17.79	55.38	11.31	61.36	11.32	58.08	0.64	1.11	0.64	1.05
BD45	20.49	66.72	13.68	71.08	12.6	70.67	0.67	1.07	0.62	1.06
BD47	6.13	21.25	3.43	21.1	3.68	21.65	0.56	0.99	0.6	1.02
BD49	3.1	9.95	2.18	11.03	1.78	11.36	0.7	1.11	0.57	1.14
BD51	1.8	7.85	1.46	9.59	1.01	7.51	0.81	1.22	0.56	0.96
BD53	14.26	43.87	9.43	48.08	8.27	45.06	0.66	1.1	0.58	1.03
BD55	6.73	24.18	3.96	24.99	4.04	25.93	0.59	1.03	0.6	1.07
BD57	7.81	23.33	4.44	23.93	5.62	27.15	0.57	1.03	0.72	1.16
BD59	4.14	11.08	3.33	11.55	1.86	11.63	0.8	1.04	0.45	1.05
BD61	0.84	3.57	0.66	2.8	0.82	3.04	0.79	0.78	0.98	0.85
BD63	6.97	21.61	3.76	20.2	4.66	22.97	0.54	0.93	0.67	1.06
BD65	3.2	9.33	1.6	9.52	2.1	9.65	0.5	1.02	0.66	1.03
BD67	6	11.24	4.68	9.99	2.76	8.93	0.78	0.89	0.46	0.79
BD69	6.14	16.23	5.71	17.78	3.86	15.23	0.93	1.1	0.63	0.94
BD71	2	6.17	1.17	5.52	1.27	6.44	0.58	0.9	0.63	1.04
BD73	5.89	16.76	2.96	15.44	4.06	18.05	0.5	0.92	0.69	1.08
BD75	2.73	9.18	1.64	8.95	1.6	10.2	0.6	0.98	0.59	1.11
BD77	9.88	0	10.22	30.97	10.04	29.33	1.03	0	1.02	0
BD79	3.06	8.65	3.63	10.05	2.05	9.12	1.19	1.16	0.67	1.05
BD81	1.31	3.32	0.86	3.33	0.94	3.9	0.66	1	0.71	1.17
BD83	5.07	9.87	5.02	10.27	2.32	7.39	0.99	1.04	0.46	0.75
BD85	1.47	5.13	2.17	4.75	1.53	4.99	1.47	0.93	1.04	0.97
BD87	1.9	5.91	2.62	7.66	2.59	9.14	1.38	1.3	1.36	1.55
BD89	1.38	6.31	2.28	8.24	2.6	8.84	1.65	1.31	1.89	1.4
BD91	0.84	1.3	1.21	1.42	0.26	0.71	1.44	1.1	0.31	0.54
BD93	0.48	1.92	0.9	2.14	0.77	2.65	1.86	1.11	1.6	1.38
BD95	1.17	4.47	1.93	4.66	1.14	4.13	1.65	1.04	0.97	0.92
BD97	1.45	5.31	2.08	6.29	1.92	6.5	1.43	1.19	1.32	1.23
BD99	1.74	7.29	3.15	8.96	2.63	9.7	1.81	1.23	1.51	1.33
BE31	4.2	11.1	4.27	11.66	2.45	10.72	1.02	1.05	0.58	0.97
BE41	3.24	11.29	4.1	14.71	2.8	12.57	1.27	1.3	0.87	1.11
BE51	3.24	9.52	1.82	9.96	1.62	10.85	0.56	1.05	0.5	1.14
BE61	2.26	8.19	1.94	9.42	1.51	9.08	0.86	1.15	0.67	1.11
BE71	3.2	9	3.08	9.91	2.15	9.9	0.96	1.1	0.67	1.1
BE81	[illegible]	7.63	3	9.03	2.48	8.55	1.75	1.18	1.45	1.12
BE91	[illegible]	[illegible]	5.91	19.83	6.06	20.87	1.54	1.33	1.58	1.4
CB77	[illegible]	[illegible]	0.77	1.81	0.82	2.31	0.78	0.85	0.84	1.08
CB79	1.35	2.5	1.98	2.67	0.96	2.31	1.47	1.07	0.71	0.92
CB87	1.63	3.84	1.38	2.87	1.07	2.84	0.85	0.75	0.65	0.74
CB89	1.83	4.2	1.44	2.92	1.27	3.1	0.79	0.7	0.69	0.74
CB97	2.31	5.74	2.26	3.92	1.66	4.52	0.98	0.68	0.72	0.79
CB99	1.71	3.6	1.23	2.7	1.08	3.28	0.72	0.75	0.63	0.91
CC17	0.03	0.04	0.02	0.04	0.01	0.06	0.8	1	0.4	1.57

Appendix A-1b (Continued):

Weather grid	BL		SN_{i}		$SN_{\heartsuit}$		SN_{i}/BL		$SN_{\heartsuit}/BL$	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	0.02	0.03	0.02	0.04	0.02	0.02	1.33	1.17	1.33	0.67
CC25	0	0	0	0	0	0	0	0	0	0
CC27	0	0.03	0	0	0.02	0.04	0	0	0	1.4
CC29	0.01	0.01	0.01	0.01	0.03	0.04	1	1	5	3.5
CC35	0	0	0	0.01	0	0	0	0	0	0
CC37	0.02	0.1	0.01	0.11	0.01	0.08	0.67	1.05	0.67	0.75
CC39	0.04	0.19	0.12	0.2	0.09	0.12	3.29	1.08	2.43	0.65
CC43	0	0	0	0	0	0	0	0	0	0
CC45	0	0	0	0	0	0	0	0	0	0
CC47	0	0.01	0	0.01	0	0	0	1	0	0
CC49	0.23	0.37	0.15	0.23	0.11	0.36	0.67	0.62	0.47	0.97
CC53	0.01	0.02	0	0.01	0.01	0.02	0	0.67	1	1
CC55	0	0.01	0	0	0	0	0	0	0	0
CC57	0	0	0	0	0	0	0	0	0	0
CC59	0.09	0.21	0.1	0.26	0.17	0.38	1.12	1.24	2	1.85
CC65	0.01	0.05	0.01	0.03	0.01	0.03	1	0.67	1	0.56
CC67	0	0.01	0	0.02	0	0	0	3	0	0
CC69	0.21	0.6	0.29	0.52	0.34	0.55	1.39	0.87	1.63	0.92
CC77	0.02	0.12	0.11	0.24	0.05	0.18	5.25	1.96	2.25	1.5
CC79	0.27	0.43	0.18	0.67	0.2	0.9	0.66	1.56	0.75	2.09
CC87	0.38	1.42	0.42	1.41	0.5	1.55	1.09	1	1.32	1.09
CC89	0.23	0.76	0.29	0.98	0.16	0.86	1.29	1.28	0.69	1.13
CC97	0.34	1.15	0.21	1.31	0.21	1.2	0.63	1.14	0.61	1.04
CD11	0.6	0.92	0.88	1	0.26	0.41	1.47	1.09	0.44	0.45
CD13	0.25	1.15	0.2	1.06	0.31	1.16	0.8	0.93	1.27	1.01
CD15	0.81	2.99	0.82	3.07	1.09	3.64	1.01	1.03	1.34	1.22
CD17	0.86	4.82	1.94	5.39	2.1	5.55	2.25	1.12	2.44	1.15
CD19	1.07	4	1.68	5.49	1.63	5.67	1.57	1.37	1.52	1.42
CD21	0.14	0.32	0.14	0.29	0.15	0.21	1	0.92	1.07	0.65
CD23	0.24	0.51	0.14	0.38	0.12	0.49	0.57	0.74	0.51	0.95
CD25	0.44	0.86	0.14	0.63	0.18	0.61	0.32	0.73	0.4	0.71
CD27	0.6	1.92	0.6	1.84	0.97	2.66	1	0.96	1.62	1.38
CD29	0.74	2.71	0.93	2.58	1.01	3.37	1.25	0.95	1.36	1.24
CD31	0.28	0.62	0.12	0.41	0.31	0.69	0.44	0.65	1.11	1.11
CD33	0.31	0.89	0.24	0.68	0.3	0.71	0.79	0.76	0.98	0.8
CD35	0.18	0.39	0.16	0.39	0.16	0.4	0.86	0.99	0.86	1.01
CD37	0.38	1.1	0.41	1.08	0.24	1.21	1.07	0.98	0.63	1.1
CD39	0.28	1.11	0.23	0.96	0.23	0.96	0.82	0.86	0.84	0.86
CD41	0.14	0.39	0.04	0.25	0.14	0.31	0.26	0.64	1	0.81
CD43	0.38	0.81	0.17	0.68	0.14	0.72	0.45	0.83	0.37	0.89
CD45	0.18	0.26	0.23	0.23	0.07	0.18	1.29	0.87	0.37	0.69
CD47	0.21	0.49	0.58	0.85	0.14	0.53	2.76	1.75	0.64	1.09
CD49	0.08	0.16	0.1	0.14	0.06	0.19	1.33	0.84	0.73	1.16
CD51	0.38	0.95	0.18	1.08	0.22	1.31	0.47	1.13	0.57	1.38
CD53	1.53	7.08	1.88	6.73	1.64	7.68	1.23	0.95	1.07	1.09
CD55	0.18	0.61	0.18	0.69	0.33	0.93	1.03	1.13	1.86	1.52
CD57	2.08	2.97	2.14	2.49	0.79	2.2	1.03	0.84	0.38	0.74
CD59	0.28	0.8	0.36	0.92	0.31	0.91	1.27	1.16	1.11	1.14
CD61	0.19	0.65	0.16	0.77	0.29	1.15	0.82	1.19	1.53	1.78
CD63	0.42	1.36	0.64	1.64	0.32	1.52	1.53	1.2	0.76	1.12
CD67	0.12	0.42	0.15	0.46	0.16	0.51	1.21	1.11	1.33	1.22
CD69	1.9	3.03	1.17	1.98	0.57	2.16	0.62	0.65	0.3	0.71
CD71	0.34	0.95	0.9	1.63	0.45	1.39	2.69	1.72	1.34	1.47
CD73	0.53	1.51	1.62	2.52	0.8	2.49	3.06	1.67	1.5	1.65
CD77	0.01	0.01	0.02	0.04	0	0.03	4	3.5	0	3
CD79	0.48	1.8	2.03	3.4	0.56	2.59	4.22	1.89	1.16	1.44
CD81	0.35	0.82	0.61	1.48	0.32	1.45	1.77	1.8	0.91	1.76

Appendix A-1b (Continued):

Weather grid	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	0.24	0.44	0.45	0.71	0.23	0.68	1.88	1.61	0.94	1.55
CD85	0.01	0.02	0	0.01	0	0.02	0	0.67	0	1.33
CE11	5.31	15.14	8.41	19.73	5.89	18.37	1.58	1.3	1.11	1.21
CE21	0.8	2.5	0.57	2.33	0.47	2.46	0.72	0.93	0.58	0.98
CE31	0.3	0.8	0.25	0.75	0.38	0.94	0.85	0.94	1.27	1.18
CE41	0.16	0.45	0.09	0.42	0.11	0.59	0.53	0.92	0.66	1.31
CE51	0.28	0.86	0.35	0.8	0.26	0.82	1.25	0.93	0.91	0.96
CE61	0.36	1.12	0.44	1.29	0.29	1.35	1.24	1.15	0.8	1.21
CE71	0.72	2.33	0.6	2.93	0.66	4.12	0.83	1.26	0.92	1.77
DB15	0.29	0.81	0.21	0.82	0.26	0.79	0.72	1.02	0.91	0.98
DB17	0.45	1.08	0.29	0.87	0.34	1.1	0.64	0.81	0.76	1.02
DB19	0.22	0.52	0.13	0.49	0.19	0.54	0.58	0.95	0.86	1.05
DB25	0.22	0.41	0.11	0.43	0.14	0.55	0.51	1.04	0.65	1.33
DB27	0.17	0.26	0.14	0.42	0.16	0.37	0.82	1.6	0.97	1.4
DB29	0.21	0.36	0.16	0.36	0.2	0.38	0.74	1	0.93	1.07
DC11	0.32	0.64	0.31	0.73	0.33	0.75	0.98	1.15	1.05	1.17
DC13	0.2	0.31	0.16	0.38	0.13	0.5	0.77	1.23	0.65	1.62
DC21	0.08	0.11	0.09	0.21	0.07	0.18	1.06	1.86	0.88	1.64
DC23	0.31	0.64	0.34	0.85	0.21	0.81	1.08	1.32	0.68	1.27
DC31	0.16	0.25	0.24	0.53	0.19	0.47	1.52	2.12	1.19	1.86
DC33	0.24	0.4	0.35	0.84	0.22	0.66	1.47	2.11	0.94	1.66
DC71	0	0	0	0.02	0	0.03	0	0	0	0
DC73	0	0.01	0	0	0	0	0	0	0	0
DC75	0.01	0	0.01	0.02	0	0.01	1	0	0	0

Appendix A-1c: Annual wind erosion (t/ha) from canola-wheat-fallow averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{lp}, SN_l).

Weather grid	BL		SN_l		SN_{lp}		SN_l/BL		SN_{lp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	4.49	5.93	3.57	6.01	2.34	4.35	0.79	1.01	0.52	0.73
BC59	2.98	3.66	1.31	3.45	1.96	3.1	0.44	0.94	0.66	0.85
BC69	2.15	2.66	1.64	2.71	1.76	2.92	0.76	1.02	0.82	1.1
BC79	0.75	0.93	0.69	1.21	0.6	0.91	0.92	1.3	0.8	0.98
BC89	1.26	1.71	0.79	1.35	0.97	2.25	0.63	0.79	0.77	1.32
BC99	0.38	0.51	0.17	0.29	0.16	0.34	0.46	0.58	0.43	0.68
BD31	9.07	9.85	9.64	12.01	6	8.02	1.06	1.22	0.66	0.81
BD33	12.31	16.4	11.36	17.7	8.14	13.03	0.92	1.08	0.66	0.79
BD35	17.77	24.87	14.61	24.86	15.73	25.46	0.82	1	0.89	1.02
BD37	16.82	22.28	12.2	21.97	10.77	19.16	0.73	0.99	0.64	0.86
BD39	8.46	10.85	6.91	10.51	3.97	8.26	0.82	0.97	0.47	0.76
BD41	7.48	12.36	8.26	12.6	5.08	8.27	1.1	1.02	0.68	0.67
BD43	31.23	43.52	26	43.55	24.63	43.19	0.83	1	0.79	0.99
BD45	34.45	54.97	29.66	53.69	24.61	51.76	0.86	0.98	0.71	0.94
BD47	14.22	19.03	12.25	19.34	12.89	21.63	0.86	1.02	0.91	1.14
BD49	8.39	10.4	6.75	10.12	6.71	11.01	0.8	0.97	0.8	1.06
BD51	4.91	7.41	4.48	8.63	3	5.82	0.91	1.17	0.61	0.79
BD53	26.11	36.03	22.35	35.87	25.06	38.2	0.86	1	0.96	1.06
BD55	14.81	21.21	12.2	19.59	14.2	24.36	0.82	0.92	0.96	1.15
BD57	13.29	18.02	9.31	18.6	12.92	19.69	0.7	1.03	0.97	1.09
BD59	9.63	10.74	7.19	11.26	7.85	11.03	0.75	1.05	0.82	1.03
BD61	1.62	2.87	1.19	2.13	1.66	2.57	0.74	0.74	1.02	0.9
BD63	12.31	16.57	11.09	16.88	11.02	18.78	0.9	1.02	0.9	1.13
BD65	6.23	7.9	5.98	8.96	5.88	8.81	0.96	1.13	0.94	1.12
BD67	8.51	10.8	6.92	9.35	4.81	7.2	0.81	0.87	0.57	0.67
BD69	12.15	15.61	11.09	16.69	8.19	15.98	0.91	1.07	0.67	1.02
BD71	2.65	6.15	1.89	5.3	3.29	6.33	0.71	0.86	1.24	1.03
BD73	9.51	12.28	7.2	13.28	7.67	13.2	0.76	1.08	0.81	1.08
BD75	5.15	7.31	5.47	8.35	4.94	8.82	1.06	1.14	0.96	1.21
BD77	20.61	27.11	19.47	27.42	15.65	22.95	0.94	1.01	0.76	0.85
BD79	7	8.88	7.36	9.41	5.13	7.83	1.05	1.06	0.73	0.88
BD81	1.7	3.34	2.21	3.82	2.12	4.16	1.3	1.14	1.25	1.25
BD83	6.24	9.04	6.85	10.06	4.32	8.03	1.1	1.11	0.69	0.89
BD85	2.41	4.22	3.59	4.86	3.9	5.66	1.49	1.15	1.62	1.34
BD87	4.01	5.93	4.63	7.96	5.13	7.14	1.15	1.34	1.28	1.2
BD89	4.93	5.68	4.99	6.99	4.62	7.87	1.01	1.23	0.94	1.39
BD91	0.87	1.3	1.22	1.42	0.42	0.81	1.4	1.09	0.48	0.62
BD93	0.79	1.77	1.41	2.35	1.53	2.76	1.79	1.33	1.95	1.56
BD95	1.92	4.4	3.73	4.59	2.66	3.75	1.94	1.04	1.39	0.85
BD97	2.35	3.77	3.13	5.72	3.82	5.93	1.33	1.52	1.62	1.57
BD99	3.98	5.68	5.14	6.9	4.29	9.31	1.29	1.22	1.08	1.64
BE31	9.64	11.54	8.12	11.7	6.49	10.18	0.84	1.01	0.67	0.88
BE41	8.45	12.02	7.75	13.64	7.53	13.34	0.92	1.13	0.89	1.11
BE51	7.34	8.84	5.43	9.73	4.93	10	0.74	1.1	0.67	1.13
BE61	6.45	7.96	5.98	9.19	5.48	8.61	0.93	1.15	0.85	1.08
BE71	8.24	10.77	7.47	10.17	6.67	10.11	0.91	0.94	0.81	0.94
BE81	5.4	7.22	6.18	8.27	4.23	9.04	1.14	1.15	0.78	1.25
BE91	8.76	14.36	9.36	16.17	10.33	18.51	1.07	1.13	1.18	1.29
CB77	1.2	1.96	0.77	1.9	0.93	2.09	0.64	0.97	0.77	1.07
CB79	1.68	2.59	2.17	2.74	0.9	1.82	1.29	1.06	0.53	0.7
CB87	2.2	4.06	1.7	3.55	1.92	4.11	0.77	0.87	0.88	1.01
CB89	2.04	4.08	2.13	3.25	1.97	4.09	1.04	0.8	0.96	1
CB97	2.95	5.68	2.62	5.1	2.69	5.53	0.89	0.9	0.91	0.97
CB99	2.02	4.17	1.39	3.42	1.91	4.34	0.69	0.82	0.95	1.04
CC17	0.04	0.04	0.04	0.05	0.01	0.03	1.16	1.43	0.27	0.81

Appendix A-1c (Continued):

Weather grid	BL		SN_i		$SN_{\blacktriangledown}$		SN_i/BL		$SN_{\blacktriangledown}$/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	0.01	0.03	0.02	0.03	0.01	0.02	2	1.1	1.3	0.57
CC25	0	0	0	0	0	0	0	0	0	0
CC27	0	0.02	0	0	0	0.03	0	0	0	1.65
CC29	0	0	0	0.02	0.01	0.01	0	0	0	0
CC35	0	0	0	0.01	0	0	0	0	0	0
CC37	0.06	0.1	0.03	0.11	0.04	0.06	0.55	1.1	0.67	0.61
CC39	0.08	0.15	0.07	0.22	0.05	0.09	0.88	1.44	0.6	0.61
CC43	0	0	0	0	0	0	0	0	0	0
CC45	0	0	0	0	0	0	0	0	0	0
CC47	0	0	0	0	0	0	0	0	0	0
CC49	0.22	0.28	0.22	0.49	0.27	0.56	0.97	1.74	1.2	1.99
CC53	0	0.01	0.01	0.01	0	0	2.33	1	1	0.43
CC55	0	0	0	0	0	0	0	0	0	0
CC57	0	0	0	0	0	0	0	0	0	0
CC59	0.08	0.17	0.1	0.29	0.16	0.31	1.29	1.69	1.96	1.79
CC65	0.02	0.03	0.02	0.03	0.02	0.02	0.87	0.9	0.74	0.67
CC67	0	0	0	0.01	0	0	0	2.33	0	1
CC69	0.21	0.45	0.29	0.47	0.39	0.66	1.38	1.04	1.87	1.48
CC77	0.04	0.07	0.06	0.25	0.13	0.17	1.7	3.47	3.51	2.37
CC79	0.27	0.33	0.34	0.53	0.39	0.7	1.26	1.62	1.44	2.13
CC87	0.62	1.32	0.52	1.32	0.46	1.22	0.83	1	0.74	0.92
CC89	0.34	0.54	0.54	0.69	0.28	0.98	1.57	1.28	0.81	1.81
CC97	0.28	0.77	0.28	0.8	0.3	1.01	1.01	1.04	1.07	1.32
CD11	0.64	0.89	0.98	1.12	0.17	0.57	1.54	1.26	0.27	0.64
CD13	0.33	1.24	0.34	0.92	0.68	1.34	1.02	0.74	2.07	1.08
CD15	1.25	2.39	1.74	2.49	1.88	3.43	1.39	1.04	1.5	1.44
CD17	1.59	4.27	2.1	4.3	3.46	5.44	1.32	1.01	2.17	1.28
CD19	1.9	3.61	2.1	3.33	2.77	4.51	1.11	0.92	1.46	1.25
CD21	0.12	0.27	0.13	0.32	0.11	0.17	1.06	1.21	0.87	0.64
CD23	0.22	0.35	0.26	0.37	0.26	0.5	1.17	1.05	1.18	1.42
CD25	0.53	0.77	0.42	0.77	0.4	0.84	0.8	1	0.76	1.09
CD27	1.07	1.89	1.3	2.09	1.66	3.11	1.22	1.11	1.56	1.65
CD29	1.42	2.35	1.39	2.9	1.58	3.06	0.98	1.23	1.12	1.3
CD31	0.25	0.53	0.2	0.55	0.37	0.99	0.82	1.03	1.51	1.86
CD33	0.61	1.28	0.4	0.8	0.46	0.92	0.65	0.62	0.76	0.72
CD35	0.24	0.36	0.28	0.48	0.21	0.49	1.16	1.34	0.85	1.37
CD37	0.35	1.26	0.37	1.43	0.76	1.36	1.07	1.14	2.19	1.08
CD39	0.5	1.15	0.61	1.13	0.71	1.53	1.22	0.99	1.42	1.33
CD41	0.17	0.29	0.06	0.27	0.2	0.39	0.36	0.92	1.2	1.34
CD43	0.34	0.57	0.11	0.6	0.3	0.74	0.32	1.05	0.88	1.3
CD45	0.21	0.28	0.29	0.32	0.15	0.3	1.38	1.14	0.7	1.05
CD47	0.18	0.64	0.59	1.06	0.23	0.73	3.33	1.65	1.32	1.14
CD49	0.08	0.14	0.12	0.27	0.19	0.35	1.52	1.87	2.47	2.47
CD51	0.3	0.64	0.41	1.04	0.49	1.47	1.37	1.63	1.62	2.31
CD53	1.83	4.84	4.1	9.09	3.42	9.33	2.24	1.88	1.87	1.93
CD55	0.31	0.62	0.36	1.15	0.51	1.16	1.14	1.85	1.62	1.87
CD57	2.56	2.19	2.54	3	1.26	2.04	0.99	1.37	0.49	0.93
CD59	0.4	1.07	0.59	1.13	0.71	1.23	1.46	1.06	1.77	1.15
CD61	0.24	0.52	0.25	0.77	0.42	1.25	1.02	1.47	1.73	2.4
CD63	0.36	0.71	0.72	1.32	0.58	1.12	2.02	1.85	1.62	1.57
CD67	0.06	0.25	0.16	0.5	0.26	0.55	2.81	1.98	4.61	2.17
CD69	2.26	2.88	1.48	2.13	1.2	2.05	0.66	0.74	0.53	0.71
CD71	0.23	0.58	0.89	1.35	0.55	1.15	3.92	2.34	2.44	1.99
CD73	0.61	1.2	2.12	2.59	1.26	2.35	3.5	2.16	2.07	1.96
CD77	0.01	0.01	0.01	0.02	0	0.02	1.43	1.77	0.43	1.77
CD79	0.37	1.62	2.04	2.79	0.66	2.5	5.57	1.73	1.8	1.55
CD81	0.25	0.56	0.52	0.99	0.43	0.98	2.09	1.76	1.75	1.74

Appendix A-1c (Continued):

Weather grid	BL		SN_i		$SN_{\heartsuit}$		SN_i/BL		$SN_{\heartsuit}$/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	0.16	0.28	0.54	0.73	0.35	0.69	3.33	2.6	2.13	2.46
CD85	0	0.01	0	0	0	0.02	0	0.43	0	3.29
CE11	9.51	14.83	11.54	16.81	9.64	16.35	1.21	1.13	1.01	1.1
CE21	1.14	1.93	0.75	1.92	1	2.06	0.66	1	0.88	1.07
CE31	0.41	0.65	0.69	1.13	0.57	1.36	1.69	1.75	1.39	2.1
CE41	0.22	0.71	0.21	0.65	0.39	0.84	0.94	0.91	1.74	1.18
CE51	0.33	0.57	0.5	0.84	0.43	0.9	1.52	1.47	1.3	1.57
CE61	0.28	0.69	0.41	1.08	0.67	1.1	1.48	1.57	2.43	1.6
CE71	0.65	1.66	0.79	2.68	1.21	3.19	1.22	1.62	1.86	1.92
DB15	0.46	0.62	0.45	0.75	0.54	0.83	0.98	1.2	1.17	1.33
DB17	0.36	0.93	0.32	0.7	0.7	0.94	0.9	0.76	1.96	1.01
DB19	0.29	0.48	0.28	0.58	0.29	0.64	0.99	1.2	1.02	1.33
DB25	0.26	0.38	0.17	0.39	0.26	0.58	0.65	1.03	0.99	1.54
DB27	0.15	0.21	0.21	0.39	0.21	0.42	1.38	1.9	1.42	2.04
DB29	0.15	0.22	0.19	0.33	0.22	0.42	1.29	1.47	1.47	1.9
DC11	0.34	0.59	0.31	0.59	0.46	0.85	0.9	1	1.33	1.43
DC13	0.17	0.25	0.28	0.49	0.28	0.6	1.65	1.98	1.65	2.42
DC21	0.11	0.15	0.14	0.23	0.13	0.22	1.27	1.51	1.21	1.45
DC23	0.5	0.68	0.49	0.85	0.49	1.09	0.97	1.25	0.99	1.59
DC31	0.2	0.26	0.36	0.61	0.3	0.53	1.79	2.33	1.48	2.03
DC33	0.4	0.49	0.7	1.09	0.49	0.81	1.76	2.22	1.24	1.64
DC71	0	0	0.01	0.02	0	0.03	0	0	0	0
DC73	0.01	0	0	0	0	0	0	1	0	0
DC75	0	0	0.01	0.02	0	0.01	0	6.67	0	3.33

Appendix A-1d: Annual wind erosion (t/ha) from winter wheat-fallow averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_l).

Weather grid	BL		SN_l		SN_{tp}		SN_l/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	2.33	2.78	3.28	3.78	1.63	1.9	1.41	1.36	0.7	0.68
BC59	1.41	1.42	0.53	0.76	0.55	0.88	0.38	0.54	0.39	0.62
BC69	1.1	1.07	0.16	0.4	0.15	0.38	0.15	0.37	0.14	0.36
BC79	0.28	0.41	0.11	0.18	0.07	0.14	0.39	0.44	0.25	0.34
BC89	1.01	0.61	0.11	0.11	0.09	0.1	0.11	0.18	0.09	0.16
BC99	0.23	0.16	0	0.02	0.01	0.05	0	0.13	0.04	0.31
BD31	3.01	4.84	4.19	4.43	1.02	1.74	1.39	0.92	0.34	0.36
BD33	6.43	6.58	3.84	3.89	1.52	1.76	0.6	0.59	0.24	0.27
BD35	6.97	8	4.11	4.57	2.39	2.64	0.59	0.57	0.34	0.33
BD37	4.85	7.72	3.73	3.91	0.24	0.4	0.77	0.51	0.05	0.05
BD39	2.91	3.2	3.25	3.29	0.16	0.18	1.12	1.03	0.05	0.06
BD41	7.74	8.65	4.33	4.74	1.61	1.93	0.56	0.55	0.21	0.22
BD43	9.61	14.31	6.09	5.77	3.86	4.45	0.63	0.4	0.4	0.31
BD45	8.81	14.36	5.29	6.84	3.63	4.59	0.6	0.48	0.41	0.32
BD47	1.69	4.2	0.56	1.04	0.69	0.81	0.33	0.25	0.41	0.19
BD49	2.26	2.57	0.99	1.08	0.07	0.13	0.44	0.42	0.03	0.05
BD51	3.4	4.17	1.23	1.4	1.03	1.15	0.36	0.34	0.3	0.28
BD53	9.18	14.26	3.87	4.27	2.86	3.21	0.42	0.3	0.31	0.23
BD55	1.7	4.57	1.05	1.42	0.68	0.82	0.62	0.31	0.4	0.18
BD57	1.48	2.09	0.69	1.12	0.51	0.91	0.47	0.54	0.34	0.44
BD59	2.49	2.95	2.61	2.65	0.13	0.15	1.05	0.9	0.05	0.05
BD61	1.41	1	0.17	0.18	0.1	0.17	0.12	0.18	0.07	0.17
BD63	1.37	3.28	1.15	1.29	0.8	1.01	0.84	0.39	0.58	0.31
BD65	2.04	1.9	0.3	0.34	0.18	0.19	0.15	0.18	0.09	0.1
BD67	4.91	5.26	3.6	3.64	0.89	0.97	0.73	0.69	0.18	0.18
BD69	6.45	7.4	3.45	3.54	1.78	1.81	0.53	0.48	0.28	0.24
BD71	0.72	0.72	0.26	0.26	0.09	0.14	0.36	0.36	0.13	0.19
BD73	3.95	3.65	0.79	0.89	0.62	1.06	0.2	0.24	0.16	0.29
BD75	2.12	2.5	0.32	0.38	0.28	0.28	0.15	0.15	0.13	0.11
BD77	13.74	13.51	5.12	6.11	4.61	5.73	0.37	0.45	0.34	0.42
BD79	4.33	3.81	2.61	2.69	0.68	0.67	0.6	0.71	0.16	0.18
BD81	0.67	0.52	0.19	0.2	0.1	0.12	0.28	0.38	0.15	0.23
BD83	3.89	4.65	3.56	3.53	0.65	0.69	0.92	0.76	0.17	0.15
BD85	1.76	1.55	1.37	1.38	0.23	0.22	0.78	0.89	0.13	0.14
BD87	2.46	2.15	0.68	1.07	0.12	0.56	0.28	0.5	0.05	0.26
BD89	2.5	2.05	0.39	0.77	0.15	0.59	0.16	0.38	0.06	0.29
BD91	0.74	0.68	1.33	1.33	0.13	0.14	1.8	1.96	0.18	0.21
BD93	0.44	0.33	0.1	0.1	0.04	0.08	0.23	0.3	0.09	0.24
BD95	1.92	1.66	0.63	0.62	0.16	0.19	0.33	0.37	0.08	0.11
BD97	2.53	2.18	0.72	0.7	0.38	0.43	0.28	0.32	0.15	0.2
BD99	3.58	2.93	0.38	0.83	0.18	0.35	0.11	0.28	0.05	0.12
BE31	6.76	6.71	3.48	3.62	0.94	0.91	0.51	0.54	0.14	0.14
BE41	5.72	5.44	3.63	3.7	0.29	0.43	0.63	0.68	0.05	0.08
BE51	1.75	2.09	0.45	0.52	0.12	0.2	0.26	0.25	0.07	0.1
BE61	3.27	2.3	0.4	0.47	0.1	0.13	0.12	0.2	0.03	0.06
BE71	4.27	3.98	2.19	2.29	0.32	0.32	0.51	0.58	0.07	0.08
BE81	3.6	3.11	0.89	0.91	0.38	0.45	0.25	0.29	0.11	0.14
BE91	7.89	7.24	1.01	2.58	2.17	2.29	0.13	0.36	0.28	0.32
CB77	0.97	0.83	0.21	0.28	0.05	0.17	0.22	0.34	0.05	0.2
CB79	1.26	1.14	1.35	1.34	0.28	0.33	1.07	1.18	0.22	0.29
CB87	1.31	1.03	0.17	0.17	0.16	0.16	0.13	0.17	0.12	0.16
CB89	1.21	0.85	0.28	0.24	0.34	0.3	0.23	0.28	0.28	0.35
CB97	1.93	1.73	0.52	0.45	0.68	0.5	0.27	0.26	0.35	0.29
CB99	1.18	0.86	0.26	0.24	0.12	0.11	0.22	0.28	0.1	0.13
CC17	0.01	0	0	0	0	0	0	0	0	0

Appendix A-1d (Continued):

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	0	0	0	0	0	0.01	0	0	0	0
CC25	0	0	0	0	0	0	0	0	0	0
CC27	0	0	0	0.01	0	0	0	0	0	0
CC29	0	0	0	0	0	0.01	0	0	0	0
CC35	0	0	0	0	0	0	0	0	0	0
CC37	0	0	0	0.01	0	0	0	0	0	0
CC39	0.04	0.02	0.01	0.02	0.01	0.02	0.25	1	0.25	1
CC43	0	0	0	0	0	0	0	0	0	0
CC45	0	0	0	0	0	0	0	0	0	0
CC47	0	0	0	0	0	0	0	0	0	0
CC49	0.1	0.06	0.03	0.03	0.02	0.03	0.3	0.5	0.2	0.5
CC53	0	0	0	0	0	0	0	0	0	0
CC55	0	0	0	0	0	0	0	0	0	0
CC57	0	0	0	0	0	0	0	0	0	0
CC59	0.08	0.06	0.03	0.03	0.02	0.09	0.38	0.5	0.25	1.5
CC65	0	0.03	0	0	0	0	0	0	0	0
CC67	0	0	0	0	0	0	0	0	0	0
CC69	0.38	0.26	0.01	0.08	0.05	0.09	0.03	0.31	0.13	0.35
CC77	0	0.02	0.03	0.01	0	0.01	0	0.5	0	0.5
CC79	0.12	0.15	0.04	0.06	0.06	0.07	0.33	0.4	0.5	0.47
CC87	0.24	0.81	0.11	0.19	0.06	0.16	0.46	0.23	0.25	0.2
CC89	0.11	0.17	0.09	0.15	0.06	0.1	0.82	0.88	0.55	0.59
CC97	0.31	0.27	0.21	0.2	0.17	0.23	0.68	0.74	0.55	0.85
CD11	0.43	0.4	0.88	0.91	0.04	0.04	2.05	2.28	0.09	0.1
CD13	0.34	0.31	0.03	0.04	0.03	0.07	0.09	0.13	0.09	0.23
CD15	0.83	0.65	0.2	0.24	0.25	0.32	0.24	0.37	0.3	0.49
CD17	1.5	1.51	0.48	0.48	0.52	0.62	0.32	0.32	0.35	0.41
CD19	1.83	1.51	0.39	0.46	0.29	0.37	0.21	0.3	0.16	0.25
CD21	0.18	0.16	0	0.03	0	0.03	0	0.19	0	0.19
CD23	0.16	0.13	0.03	0.03	0.03	0.03	0.19	0.23	0.19	0.23
CD25	0.25	0.21	0.06	0.07	0.05	0.05	0.24	0.33	0.2	0.24
CD27	0.39	0.28	0.11	0.1	0.08	0.11	0.28	0.36	0.21	0.39
CD29	1.26	1.09	0.21	0.24	0.29	0.32	0.17	0.22	0.23	0.29
CD31	0.21	0.15	0.02	0.02	0.04	0.08	0.1	0.13	0.19	0.53
CD33	0.2	0.15	0.05	0.04	0.02	0.03	0.25	0.27	0.1	0.2
CD35	0.2	0.16	0.06	0.06	0.05	0.06	0.3	0.38	0.25	0.38
CD37	0.41	0.31	0.21	0.23	0.08	0.11	0.51	0.74	0.2	0.35
CD39	0.47	0.44	0.03	0.06	0.05	0.07	0.06	0.14	0.11	0.16
CD41	0.08	0.06	0.01	0.01	0.03	0.05	0.13	0.17	0.38	0.83
CD43	0.24	0.15	0.09	0.06	0.03	0.1	0.38	0.4	0.13	0.67
CD45	0.16	0.14	0.2	0.2	0.01	0.02	1.25	1.43	0.06	0.14
CD47	0.19	0.19	0.47	0.47	0.09	0.14	2.47	2.47	0.47	0.74
CD49	0.16	0.13	0.02	0.02	0.02	0.02	0.13	0.15	0.13	0.15
CD51	0.4	0.31	0.13	0.14	0.09	0.07	0.32	0.45	0.22	0.23
CD53	2.11	1.85	0.52	0.56	0.35	0.47	0.25	0.3	0.17	0.25
CD55	0.2	0.26	0.1	0.09	0.06	0.06	0.5	0.35	0.3	0.23
CD57	0.3	0.23	1.97	1.99	0.47	0.46	6.57	8.65	1.57	2
CD59	0.32	0.32	0.18	0.14	0.12	0.13	0.56	0.44	0.38	0.41
CD61	0.15	0.12	0.03	0.05	0.09	0.07	0.2	0.42	0.6	0.58
CD63	0.37	0.3	0.42	0.54	0.09	0.13	1.14	1.8	0.24	0.43
CD67	0.28	0.25	0.07	0.06	0.14	0.08	0.25	0.24	0.5	0.32
CD69	2.02	1.93	0.92	1.07	0.38	0.48	0.46	0.55	0.19	0.25
CD71	0.43	0.4	0.74	0.79	0.1	0.13	1.72	1.98	0.23	0.32
CD73	0.71	0.53	1.32	1.38	0.51	0.52	1.86	2.6	0.72	0.98
CD77	0	0	0.02	0.02	0	0	0	0	0	0
CD79	0.9	0.59	1.67	1.87	0.28	0.4	1.86	3.17	0.31	0.68
CD81	0.3	0.33	0.37	0.46	0.13	0.11	1.23	1.39	0.43	0.33

Appendix A-1d (Continued):

Weather grid	BL		SN_f		SN_w		SN_f/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	0.11	0.09	0.4	0.38	0.12	0.13	3.64	4.22	1.09	1.44
CD85	0	0	0	0	0	0	0	0	0	0
CE11	9.26	8.03	4.77	5.06	1.53	1.85	0.52	0.63	0.17	0.23
CE21	1.54	1.27	0.2	0.24	0.04	0.48	0.13	0.19	0.03	0.38
CE31	0.31	0.24	0.14	0.12	0.15	0.13	0.45	0.5	0.48	0.54
CE41	0.17	0.14	0.07	0.02	0.1	0.08	0.41	0.14	0.59	0.57
CE51	0.53	0.46	0.04	0.17	0.03	0.1	0.08	0.37	0.06	0.22
CE61	0.4	0.32	0.11	0.18	0.17	0.15	0.28	0.56	0.43	0.47
CE71	0.51	0.37	0.19	0.25	0.18	0.23	0.37	0.68	0.35	0.62
DB15	0.6	0.44	0.15	0.2	0.2	0.16	0.25	0.45	0.33	0.36
DB17	0.67	0.63	0.06	0.15	0.26	0.14	0.09	0.24	0.39	0.22
DB19	0.16	0.14	0.07	0.08	0.07	0.05	0.44	0.57	0.44	0.36
DB25	0.13	0.17	0.15	0.13	0.23	0.14	1.15	0.76	1.77	0.82
DB27	0.08	0.07	0.09	0.08	0.05	0.04	1.13	1.14	0.63	0.57
DB29	0.07	0.04	0.06	0.04	0.04	0.02	0.86	1	0.57	0.5
DC11	0.4	0.31	0.13	0.13	0.15	0.13	0.32	0.42	0.38	0.42
DC13	0.11	0.08	0.12	0.08	0.22	0.03	1.09	1	2	0.38
DC21	0.06	0.04	0.02	0.01	0.02	0.03	0.33	0.25	0.33	0.75
DC23	0.15	0.11	0.2	0.18	0.07	0.06	1.33	1.64	0.47	0.55
DC31	0.07	0.04	0.08	0.06	0.06	0.05	1.14	1.5	0.86	1.25
DC33	0.17	0.12	0.16	0.12	0.14	0.08	0.94	1	0.82	0.67
DC71	0	0	0.03	0.03	0.03	0.03	0	0	0	0
DC73	0	0	0.03	0	0	0	0	0	0	0
DC75	0	0	0.01	0.01	0.01	0.01	0	0	0	0

Appendix A-2a: Annual water erosion (t/ha) from continuous wheat averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	19.07	21.45	20.77	24.77	29.77	36.04	1.09	1.15	1.56	1.68
BC59	25.89	30.41	26.39	31.72	35.62	44.93	1.02	1.04	1.38	1.48
BC69	27.16	31.15	28.65	34.59	38.13	47.59	1.05	1.11	1.4	1.53
BC79	29.11	37.31	29.23	37.49	37.31	49.33	1	1	1.28	1.32
BC89	4.26	4.7	4.35	4.54	7.92	8.44	1.02	0.97	1.86	1.8
BC99	0.18	0.2	0.15	0.17	0.36	0.4	0.83	0.85	2	2
BD31	9.9	12.41	9.2	10.77	16.59	20	0.93	0.87	1.68	1.61
BD33	0.94	1.12	0.74	0.81	1.79	1.93	0.79	0.72	1.9	1.72
BD35	0.11	0.12	0.07	0.08	0.17	0.21	0.64	0.67	1.55	1.75
BD37	0.02	0.03	0.02	0.02	0.08	0.09	1	0.67	4	3
BD39	0.09	0.09	0.08	0.07	0.36	0.42	0.89	0.78	4	4.67
BD41	17.35	20.99	15.88	18.49	25.91	31.66	0.92	0.88	1.49	1.51
BD43	0.12	0.16	0.09	0.1	0.21	0.26	0.75	0.63	1.75	1.63
BD45	0.08	0.1	0.06	0.08	0.18	0.2	0.75	0.8	2.25	2
BD47	0.05	0.05	0.02	0.02	0.09	0.1	0.4	0.4	1.8	2
BD49	0.14	0.15	0.12	0.15	0.44	0.47	0.86	1	3.14	3.13
BD51	16.93	20.76	15.69	18.07	26.83	32.21	0.93	0.87	1.58	1.55
BD53	0.1	0.12	0.11	0.12	0.21	0.23	1.1	1	2.1	1.92
BD55	0.04	0.04	0.03	0.03	0.08	0.09	0.75	0.75	2	2.25
BD57	0.01	0.01	0	0	0.01	0.01	0	0	1	1
BD59	0.03	0.02	0.02	0.02	0.07	0.07	0.67	1	2.33	3.5
BD61	1.73	1.9	1.5	1.53	2.97	3.08	0.87	0.81	1.72	1.62
BD63	0.67	0.75	0.57	0.63	1.44	1.69	0.85	0.84	2.15	2.25
BD65	0.04	0.04	0.04	0.04	0.14	0.15	1	1	3.5	3.75
BD67	0.18	0.18	0.19	0.2	0.63	0.63	1.06	1.11	3.5	3.5
BD69	0.98	1.16	0.89	0.99	1.84	1.94	0.91	0.85	1.88	1.67
BD71	0.11	0.1	0.09	0.09	0.21	0.22	0.82	0.9	1.91	2.2
BD73	0.51	0.55	0.5	0.54	1.14	1.26	0.98	0.98	2.24	2.29
BD75	0.12	0.13	0.16	0.14	0.41	0.43	1.33	1.08	3.42	3.31
BD77	0.01	0.01	0	0.01	0.01	0.01	0	1	1	1
BD79	0.71	0.76	0.79	0.92	1.32	1.4	1.11	1.21	1.86	1.84
BD81	0.1	0.09	0.09	0.1	0.23	0.24	0.9	1.11	2.3	2.67
BD83	0.17	0.18	0.15	0.16	0.43	0.44	0.88	0.89	2.53	2.44
BD85	0.75	0.78	0.62	0.62	1.99	2.12	0.83	0.79	2.65	2.72
BD87	0.02	0.02	0.03	0.03	0.08	0.09	1.5	1.5	4	4.5
BD89	0.02	0.02	0.02	0.02	0.07	0.08	1	1	3.5	4
BD91	0.67	0.71	0.59	0.62	1.18	1.21	0.88	0.87	1.76	1.7
BD93	0.42	0.42	0.35	0.3	1.18	1.32	0.83	0.71	2.81	3.14
BD95	0.13	0.13	0.11	0.11	0.45	0.48	0.85	0.85	3.46	3.69
BD97	0.13	0.18	0.2	0.21	0.43	0.45	1.54	1.17	3.31	2.5
BD99	0.04	0.04	0.04	0.04	0.12	0.13	1	1	3	3.25
BE31	0.03	0.04	0.17	0.17	0.45	0.49	5.67	4.25	15	12.25
BE41	7.42	8.59	6.5	7.2	14.86	16.59	0.88	0.84	2	1.93
BE51	0.65	0.68	0.61	0.66	1.84	2.02	0.94	0.97	2.83	2.97
BE61	0.31	0.34	0.3	0.35	1	1.03	0.97	1.03	3.23	3.03
BE71	0.48	0.57	0.56	0.53	0.93	1.07	1.17	0.93	1.94	1.88
BE81	0.15	0.18	0.14	0.14	0.3	0.34	0.93	0.78	2	1.89
BE91	0.06	0.08	0.01	0.01	0.02	0.02	0.17	0.13	0.33	0.25
CB77	3.2	3.5	0.48	0.5	0.72	0.76	0.15	0.14	0.22	0.22
CB79	2.35	2.6	0.36	0.35	0.53	0.57	0.15	0.13	0.23	0.22
CB87	0.24	0.26	0.23	0.23	0.31	0.3	0.96	0.88	1.29	1.15
CB89	0.18	0.18	0.16	0.17	0.26	0.26	0.89	0.94	1.44	1.44
CB97	0.23	0.26	0.18	0.17	0.25	0.27	0.78	0.65	1.09	1.04
CB99	0.12	0.14	0.1	0.1	0.19	0.18	0.83	0.71	1.58	1.29
CC17	0.38	0.43	1.89	2.18	3.5	4.02	4.97	5.07	9.21	9.35

Appendix A-2a (Continued):

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	0.31	0.34	0.27	0.3	0.57	0.63	0.87	0.88	1.84	1.85
CC25	0.25	0.28	0.27	0.29	0.45	0.51	1.08	1.04	1.8	1.82
CC27	0.23	0.26	0.2	0.22	0.45	0.52	0.87	0.85	1.96	2
CC29	4.58	5.28	3.99	4.27	7.68	8.64	0.87	0.81	1.68	1.64
CC35	9.89	11.58	0.34	0.37	0.74	0.82	0.03	0.03	0.07	0.07
CC37	9.99	11.53	0.26	0.29	0.53	0.61	0.03	0.03	0.05	0.05
CC39	18.11	21.04	16.43	17.9	26.43	29.73	0.91	0.85	1.46	1.41
CC43	3.7	4.21	3.62	3.86	6.29	6.95	0.98	0.92	1.7	1.65
CC45	6.17	7.04	5.55	5.99	9.52	10.35	0.9	0.85	1.54	1.47
CC47	5.35	6.25	4.83	5.27	8.38	9.24	0.9	0.84	1.57	1.48
CC49	16.66	19.84	13.85	15.18	27.58	30.17	0.83	0.77	1.66	1.52
CC53	3.89	4.51	3.45	3.74	5.81	6.48	0.89	0.83	1.49	1.44
CC55	4.23	4.73	3.65	3.94	6.21	6.81	0.86	0.83	1.47	1.44
CC57	5.52	6.37	4.73	5.2	8.11	8.9	0.86	0.82	1.47	1.4
CC59	1.29	1.5	1.03	1.13	2.26	2.5	0.8	0.75	1.75	1.67
CC65	3.1	3.53	2.89	3.12	4.61	5.06	0.93	0.88	1.49	1.43
CC67	3.99	4.58	3.51	3.74	5.55	6.06	0.88	0.82	1.39	1.32
CC69	0.71	0.77	0.46	0.47	0.97	1.05	0.65	0.61	1.37	1.36
CC77	16.82	19.91	15.59	17.48	23.63	27.48	0.93	0.88	1.4	1.38
CC79	3.3	3.86	2.69	2.85	4.93	5.29	0.82	0.74	1.49	1.37
CC87	0.56	0.66	0.48	0.53	0.8	0.87	0.86	0.8	1.43	1.32
CC89	4.83	5.65	4.64	4.99	7.24	7.87	0.96	0.88	1.5	1.39
CC97	0.28	0.34	0.23	0.25	0.37	0.4	0.82	0.74	1.32	1.18
CD11	0.12	0.12	0.11	0.12	0.3	0.31	0.92	1	2.5	2.58
CD13	1.92	2.09	1.55	1.48	4.42	4.58	0.81	0.71	2.3	2.19
CD15	0.07	0.08	0.03	0.04	0.15	0.16	0.43	0.5	2.14	2
CD17	0.07	0.07	0.08	0.08	0.13	0.14	1.14	1.14	1.86	2
CD19	1.28	1.41	1.28	1.36	3.14	3.31	1	0.96	2.45	2.35
CD21	12.76	14.61	11.24	11.93	19.73	22.54	0.88	0.82	1.55	1.54
CD23	2.18	2.3	2.05	2.02	4.47	4.73	0.94	0.88	2.05	2.06
CD25	0.07	0.08	0.07	0.06	0.19	0.21	1	0.75	2.71	2.63
CD27	0.12	0.12	0.09	0.08	0.24	0.23	0.75	0.67	2	1.92
CD29	0.52	0.57	0.48	0.5	1.05	1.15	0.92	0.88	2.02	2.02
CD31	0.85	0.98	0.84	0.86	1.92	2.07	0.99	0.88	2.26	2.11
CD33	0.64	0.67	0.52	0.5	1.18	1.18	0.81	0.75	1.84	1.76
CD35	0.1	0.11	0.07	0.06	0.19	0.19	0.7	0.55	1.9	1.73
CD37	0.1	0.11	0.12	0.1	0.28	0.27	1.2	0.91	2.8	2.45
CD39	0.67	0.71	0.53	0.55	1.26	1.24	0.79	0.77	1.88	1.75
CD41	0.12	0.14	0.08	0.07	0.28	0.27	0.67	0.5	2.33	1.93
CD43	2.6	3.06	2.18	2.29	6.66	6.86	0.84	0.75	2.56	2.24
CD45	0.05	0.05	0.04	0.04	0.15	0.14	0.8	0.8	3	2.8
CD47	0.12	0.14	0.08	0.09	0.27	0.26	0.67	0.64	2.25	1.86
CD49	0.41	0.42	0.37	0.38	0.87	0.86	0.9	0.9	2.12	2.05
CD51	1.11	1.26	0.8	0.8	2.11	2.18	0.72	0.63	1.9	1.73
CD53	0.01	0.01	0.01	0.01	0.04	0.04	1	1	4	4
CD55	0.05	0.04	0.04	0.04	0.19	0.18	0.8	1	3.8	4.5
CD57	0.06	0.07	0.06	0.06	0.15	0.15	1	0.86	2.5	2.14
CD59	0.07	0.07	0.05	0.05	0.19	0.19	0.71	0.71	2.71	2.71
CD61	2.47	2.75	0.1	0.1	0.25	0.24	0.04	0.04	0.1	0.09
CD63	0.07	0.08	0.06	0.06	0.2	0.21	0.86	0.75	2.86	2.63
CD67	2.33	2.7	2.22	2.35	4.89	5.29	0.95	0.87	2.1	1.96
CD69	0.06	0.07	1.57	1.69	3.64	3.84	26.17	24.14	60.67	54.86
CD71	0.16	0.19	0.11	0.1	0.23	0.25	0.69	0.53	1.44	1.32
CD73	0.08	0.09	0.07	0.07	0.15	0.16	0.88	0.78	1.88	1.78
CD77	3.22	3.7	2.88	3.14	7.01	7.76	0.89	0.85	2.18	2.1
CD79	0.15	0.16	0.14	0.15	0.38	0.38	0.93	0.94	2.53	2.38
CD81	0.14	0.16	0.12	0.12	0.26	0.27	0.86	0.75	1.86	1.69

Appendix A-2a (Continued):

Weather grid	BL		SN_l		SN_{φ}		SN_l/BL		SN_{φ}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	0.55	0.63	0.45	0.47	0.96	1.01	0.82	0.75	1.75	1.6
CD85	0.13	0.14	0.11	0.11	0.26	0.27	0.85	0.79	2	1.93
CE11	0.24	0.25	0.22	0.23	0.63	0.69	0.92	0.92	2.63	2.76
CE21	0	0.01	0.01	0.01	0.01	0.02	0	1	0	2
CE31	0.32	0.33	0.28	0.29	0.78	0.78	0.88	0.88	2.44	2.36
CE41	2.11	2.05	1.82	1.83	4.69	4.73	0.86	0.89	2.22	2.31
CE51	0.43	0.47	1.62	1.52	4.01	4.26	3.77	3.23	9.33	9.06
CE61	0.64	0.72	1.65	1.71	4.36	4.58	2.58	2.38	6.81	6.36
CE71	0.65	0.71	1.91	1.97	4.05	4.2	2.94	2.77	6.23	5.92
DB15	1.49	1.72	4.61	5.15	5.75	6.38	3.09	2.99	3.86	3.71
DB17	1.48	1.73	4.69	5.05	6.15	6.85	3.17	2.92	4.16	3.96
DB19	0.09	0.1	0.1	0.1	0.16	0.14	1.11	1	1.78	1.4
DB25	0.31	0.33	0.25	0.28	0.41	0.44	0.81	0.85	1.32	1.33
DB27	0.36	0.37	0.29	0.3	0.47	0.51	0.81	0.81	1.31	1.38
DB29	0.37	0.4	0.27	0.32	0.48	0.52	0.73	0.8	1.3	1.3
DC11	0.49	0.55	0.45	0.5	0.75	0.79	0.92	0.91	1.53	1.44
DC13	0.28	0.32	0.28	0.28	0.48	0.5	1	0.88	1.71	1.56
DC21	0.19	0.2	0.18	0.19	0.38	0.38	0.95	0.95	2	1.9
DC23	0.25	0.25	0.24	0.24	0.4	0.41	0.96	0.96	1.6	1.64
DC31	0.33	0.35	0.28	0.3	0.43	0.47	0.85	0.86	1.3	1.34
DC33	0.36	0.37	0.38	0.38	0.53	0.52	1.06	1.03	1.47	1.41
DC71	0.22	0.24	0.14	0.16	0.21	0.23	0.64	0.67	0.95	0.96
DC73	0.12	0.13	0.05	0.05	0.13	0.14	0.42	0.38	1.08	1.08
DC75	0.09	0.1	0.07	0.08	0.11	0.14	0.78	0.8	1.22	1.4

Appendix A-2b: Annual water erosion (t/ha) from wheat-fallow averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	26.71	54.63	26.7	65.21	32.77	85.84	1	1.19	1.23	1.57
BC59	28.16	64.95	27.65	68.74	37.85	92.86	0.98	1.06	1.34	1.43
BC69	30.1	62.87	31.12	72.05	44.72	96.7	1.03	1.15	1.49	1.54
BC79	32.17	64.02	33.94	66.26	37.95	80.63	1.06	1.03	1.18	1.26
BC89	6.48	12.84	6.18	11.91	8.62	21.93	0.95	0.93	1.33	1.71
BC99	9.77	0.59	0.21	0.49	0.42	1.17	0.02	0.83	0.04	1.99
BD31	11.95	32.58	10.93	30.12	18.08	53.62	0.91	0.92	1.51	1.65
BD33	1.08	3.19	0.88	2.38	1.92	5.2	0.82	0.75	1.78	1.63
BD35	0.12	0.37	0.09	0.24	0.2	0.61	0.74	0.64	1.74	1.64
BD37	0.04	0.1	0.03	0.06	0.1	0.23	0.71	0.6	2.71	2.3
BD39	0.14	0.43	0.13	0.36	0.44	1.06	0.96	0.83	3.22	2.47
BD41	20.47	47.3	18.14	44.01	28.78	70.19	0.89	0.93	1.41	1.48
BD43	0.14	0.61	0.11	0.39	0.25	0.98	0.75	0.63	1.75	1.61
BD45	0.11	0.54	0.09	0.38	0.23	0.88	0.77	0.69	2.05	1.63
BD47	0.06	0.17	0.04	0.1	0.11	0.31	0.67	0.59	1.83	1.82
BD49	0.12	0.54	0.19	0.51	0.53	1.5	1.65	0.94	4.61	2.78
BD51	20.58	48.5	17.48	39.03	28.71	67.14	0.85	0.8	1.4	1.38
BD53	0.12	0.38	0.12	0.45	0.26	1.07	0.96	1.2	2.13	2.84
BD55	0.05	0.15	0.04	0.13	0.11	0.3	0.8	0.86	2.1	2.07
BD57	0.01	0.03	0.01	0.03	0.01	0.07	0.5	1	1	2.6
BD59	0.04	0.1	0.04	0.11	0.09	0.21	0.88	1.16	2.13	2.16
BD61	1.97	4.32	1.74	3.55	3.17	7.4	0.88	0.82	1.61	1.71
BD63	1	2.66	0.75	2.3	1.7	5.17	0.75	0.86	1.7	1.94
BD65	0.06	0.16	0.06	0.19	0.19	0.45	1	1.19	3.17	2.78
BD67	0.28	0.59	0.31	0.88	0.83	2.26	1.13	1.48	3.02	3.82
BD69	1.11	2.49	1.06	3.2	2.26	5.53	0.95	1.28	2.04	2.22
BD71	0.23	0.37	0.14	0.24	0.25	0.52	0.61	0.64	1.07	1.41
BD73	0.78	1.65	0.63	1.82	1.33	3.76	0.81	1.1	1.71	2.29
BD75	0.21	0.46	0.21	0.46	0.53	1.33	1.02	1	2.56	2.92
BD77	0.02	0	0.01	0.02	0.01	0.04	0.33	0	0.67	0
BD79	0.95	2.69	1.03	2.77	1.82	4.52	1.08	1.03	1.92	1.68
BD81	0.18	0.31	0.13	0.23	0.27	0.53	0.71	0.74	1.51	1.71
BD83	0.28	0.62	0.31	0.57	0.56	1.37	1.09	0.92	2	2.21
BD85	1.24	2.23	1.37	2.33	2.59	5.9	1.11	1.05	2.09	2.65
BD87	0.03	0.08	0.04	0.08	0.11	0.28	1.17	1	3.5	3.44
BD89	0.05	0.09	0.05	0.09	0.11	0.23	1	0.94	2.33	2.5
BD91	0.83	1.61	0.78	1.37	1.31	2.8	0.94	0.85	1.58	1.74
BD93	0.61	1.25	0.55	1.22	1.49	3.76	0.9	0.97	2.43	3
BD95	0.2	0.45	0.23	0.42	0.56	1.3	1.15	0.92	2.8	2.88
BD97	0.24	0.55	0.29	0.53	0.54	1.32	1.21	0.96	2.23	2.41
BD99	0.05	0.12	0.05	0.12	0.15	0.39	1	1	3	3.39
BE31	0.05	0.13	0.22	0.58	0.55	1.44	4.4	4.6	10.9	11.52
BE41	9.22	23.69	8.07	17.69	16.4	37.37	0.88	0.75	1.78	1.58
BE51	0.82	2.03	0.84	2.36	2.18	5.73	1.02	1.16	2.67	2.82
BE61	0.5	1.72	0.46	1.05	1.37	3.35	0.91	0.61	2.74	1.95
BE71	0.69	1.57	0.78	1.74	1.48	3.72	1.12	1.11	2.14	2.38
BE81	0.2	0.43	0.22	0.43	0.47	0.91	1.1	1.01	2.33	2.13
BE91	0.09	0.25	0.01	0.04	0.02	0.06	0.11	0.14	0.22	0.24
CB77	3.59	7.66	0.61	1.16	0.8	2.06	0.17	0.15	0.22	0.27
CB79	2.68	5.34	0.44	0.88	0.64	1.63	0.16	0.16	0.24	0.31
CB87	0.28	0.51	0.29	0.5	0.36	0.78	1.04	0.98	1.27	1.53
CB89	0.22	0.36	0.23	0.38	0.31	0.62	1.02	1.04	1.41	1.71
CB97	0.29	0.49	0.22	0.36	0.31	0.59	0.77	0.73	1.07	1.22
CB99	0.17	0.28	0.14	0.23	0.21	0.39	0.82	0.82	1.24	1.39
CC17	0.41	0.98	2.03	4.84	3.79	10.97	4.95	4.96	9.24	11.25

Appendix A-2b (Continued):

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	0.34	0.79	0.28	0.76	0.64	1.78	0.84	0.96	1.91	2.27
CC25	0.3	0.67	0.3	0.76	0.51	1.52	1	1.13	1.73	2.27
CC27	0.26	0.64	0.22	0.58	0.52	1.51	0.86	0.9	2.02	2.36
CC29	5.3	11.61	4.7	9.79	8.17	19.55	0.89	0.84	1.54	1.68
CC35	11.96	26.87	0.41	0.98	0.79	2.21	0.03	0.04	0.07	0.08
CC37	12.04	25.28	0.3	0.71	0.61	1.77	0.02	0.03	0.05	0.07
CC39	21.54	43.32	20.12	38.73	27.36	59.27	0.93	0.89	1.27	1.37
CC43	4.25	9.14	4.29	9	6.81	18.44	1.01	0.99	1.6	2.02
CC45	6.82	14.43	6.73	12.47	9.88	23.21	0.99	0.86	1.45	1.61
CC47	6.22	13.57	5.86	11.59	8.86	20.53	0.94	0.85	1.43	1.51
CC49	21.87	42.5	19.8	37.11	29.75	78.54	0.91	0.87	1.36	1.85
CC53	4.23	8.7	3.97	7.77	6.22	14.86	0.94	0.89	1.47	1.71
CC55	4.48	9.59	4.32	8.17	6.58	15.2	0.96	0.85	1.47	1.59
CC57	6.19	12.83	5.39	10.49	8.54	18.98	0.87	0.82	1.38	1.48
CC59	1.5	3.09	1.22	2.68	2.61	6.39	0.81	0.87	1.74	2.07
CC65	3.61	7.75	3.45	6.87	5.05	12.41	0.96	0.89	1.4	1.6
CC67	4.44	9.36	4.05	7.8	5.84	13.36	0.91	0.83	1.32	1.43
CC69	0.77	1.77	0.62	1.38	1.12	2.68	0.81	0.78	1.45	1.51
CC77	19.16	40.19	17.81	33.08	24.59	50.74	0.93	0.82	1.28	1.26
CC79	3.82	8.12	3.15	5.6	5.29	10.92	0.82	0.69	1.38	1.35
CC87	0.65	1.51	0.52	1.04	0.9	2.09	0.8	0.69	1.39	1.39
CC89	5.59	11.52	5.29	9.31	7.63	15.39	0.95	0.81	1.36	1.34
CC97	0.31	0.7	0.29	0.54	0.41	0.92	0.93	0.77	1.34	1.32
CD11	0.14	0.22	0.13	0.22	0.33	0.71	0.96	0.98	2.41	3.2
CD13	2.36	4.96	1.91	3.6	4.77	10.72	0.81	0.73	2.02	2.16
CD15	0.1	0.2	0.07	0.14	0.19	0.44	0.68	0.69	2	2.26
CD17	0.09	0.19	0.1	0.2	0.18	0.42	1.06	1.03	2	2.21
CD19	1.75	3.75	1.77	3.1	3.74	7.67	1.01	0.83	2.14	2.04
CD21	14.44	29.41	13.07	25.42	21.76	47.57	0.9	0.86	1.51	1.62
CD23	2.48	4.92	2.44	4.11	4.93	9.62	0.99	0.84	1.99	1.95
CD25	0.11	0.21	0.09	0.15	0.23	0.42	0.86	0.69	2.19	1.98
CD27	0.16	0.27	0.12	0.18	0.25	0.46	0.75	0.68	1.56	1.72
CD29	0.7	1.31	0.63	1.24	1.25	2.59	0.9	0.95	1.79	1.98
CD31	1	2.08	1.1	1.94	2.07	4.59	1.1	0.93	2.08	2.21
CD33	0.72	1.1	0.63	0.82	1.3	1.99	0.88	0.74	1.8	1.81
CD35	0.12	0.22	0.09	0.17	0.23	0.48	0.75	0.75	1.92	2.16
CD37	0.12	0.23	0.15	0.22	0.32	0.54	1.21	0.93	2.63	2.33
CD39	0.87	1.43	0.7	0.99	1.46	2.32	0.81	0.69	1.68	1.63
CD41	0.18	0.28	0.14	0.22	0.3	0.51	0.77	0.79	1.69	1.82
CD43	3.56	7.04	3.09	5.67	7.19	14.84	0.87	0.81	2.02	2.11
CD45	0.07	0.1	0.06	0.08	0.17	0.25	0.85	0.84	2.62	2.58
CD47	0.18	0.32	0.13	0.21	0.33	0.64	0.69	0.65	1.81	2.03
CD49	0.53	0.89	0.44	0.64	0.98	1.47	0.83	0.72	1.85	1.65
CD51	1.28	2.73	1.03	2.06	2.31	5.63	0.8	0.75	1.8	2.06
CD53	0.01	0.02	0.02	0.03	0.04	0.07	1.5	2	4	4.33
CD55	0.07	0.09	0.06	0.08	0.21	0.29	0.92	0.83	3.23	3.17
CD57	0.08	0.14	0.07	0.09	0.15	0.25	0.87	0.64	2	1.75
CD59	0.11	0.19	0.09	0.13	0.22	0.35	0.77	0.66	1.95	1.82
CD61	2.87	5.66	0.12	0.22	0.27	0.53	0.04	0.04	0.09	0.09
CD63	0.1	0.18	0.07	0.17	0.23	0.6	0.74	0.92	2.37	3.31
CD67	2.96	6.69	2.43	5.13	5.19	12.75	0.82	0.77	1.75	1.91
CD69	0.08	0.2	2.39	4.55	3.9	9.33	29.88	23.33	48.75	47.85
CD71	0.18	0.41	0.13	0.26	0.25	0.63	0.71	0.64	1.43	1.56
CD73	0.11	0.22	0.09	0.22	0.19	0.47	0.77	0.98	1.68	2.11
CD77	4.66	9.81	4.5	8.84	7.67	18.6	0.97	0.9	1.65	1.9
CD79	0.24	0.43	0.26	0.47	0.41	0.92	1.08	1.09	1.71	2.14
CD81	0.18	0.36	0.14	0.29	0.28	0.61	0.8	0.79	1.6	1.69

Appendix A-2b (Continued):

Weather grid	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	0.66	1.32	0.66	1.17	1.07	2.24	0.99	0.89	1.61	1.7
CD85	0.17	0.34	0.16	0.28	0.29	0.64	0.94	0.82	1.76	1.87
CE11	0.37	0.86	0.34	0.72	0.83	1.94	0.92	0.84	2.23	2.27
CE21	0.01	0.04	0.02	0.04	0.02	0.05	1.5	1.14	2	1.43
CE31	0.69	1.08	0.52	0.72	0.94	1.67	0.76	0.67	1.36	1.55
CE41	4.14	6.28	3.64	4.69	5.23	8.72	0.88	0.75	1.26	1.39
CE51	0.89	1.65	2.03	4.26	4.57	11.11	2.29	2.58	5.16	6.73
CE61	1.11	1.93	2.99	4.75	4.49	10.94	2.71	2.46	4.06	5.67
CE71	1.12	2.01	3.21	5.61	4.48	10.5	2.87	2.8	4.02	5.23
DB15	1.71	3.8	5.39	10.55	6.67	16.24	3.16	2.78	3.91	4.27
DB17	1.82	3.89	5.84	10.91	6.76	16.67	3.22	2.8	3.72	4.29
DB19	0.14	0.25	0.12	0.2	0.19	0.39	0.89	0.8	1.37	1.56
DB25	0.42	0.82	0.34	0.66	0.46	1.07	0.81	0.81	1.08	1.31
DB27	0.45	0.92	0.37	0.65	0.54	1.26	0.82	0.7	1.2	1.38
DB29	0.42	0.87	0.36	0.71	0.57	1.26	0.85	0.82	1.36	1.45
DC11	0.62	1.26	0.54	1.19	0.78	2.23	0.88	0.95	1.27	1.78
DC13	0.4	0.82	0.41	0.79	0.53	1.26	1.01	0.97	1.33	1.55
DC21	0.3	0.58	0.32	0.63	0.46	1.08	1.07	1.08	1.52	1.85
DC23	0.33	0.54	0.32	0.48	0.47	0.85	0.97	0.89	1.42	1.57
DC31	0.41	0.71	0.38	0.59	0.51	0.97	0.93	0.84	1.23	1.37
DC33	0.46	0.71	0.49	0.73	0.62	1.05	1.05	1.02	1.34	1.48
DC71	0.32	0.65	0.24	0.42	0.25	0.62	0.73	0.64	0.78	0.95
DC73	0.21	0.41	0.08	0.14	0.14	0.34	0.36	0.35	0.64	0.84
DC75	0.15	0.35	0.1	0.23	0.15	0.39	0.69	0.65	1.03	1.12

Appendix A-2c: Annual water erosion (t/ha) from canola-wheat-fallow averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	23.47	34.9	24.56	38.68	30.83	48.5	1.05	1.11	1.31	1.39
BC59	26.69	42.52	26.73	40.46	35.9	65.08	1	0.95	1.35	1.53
BC69	29.39	50.59	30.1	51.93	43.13	62.52	1.02	1.03	1.47	1.24
BC79	33.31	51.73	32.4	45.53	37.38	60.81	0.97	0.88	1.12	1.18
BC89	6.01	2.72	5.72	2.46	8.48	4.58	0.95	0.91	1.41	1.68
BC99	0.25	0.32	0.19	0.24	0.37	0.64	0.76	0.74	1.49	1.98
BD31	10.69	46.38	10.25	42.82	16.8	59.89	0.96	0.92	1.57	1.29
BD33	0.97	7.22	0.84	6.86	1.74	13.13	0.87	0.95	1.8	1.82
BD35	0.12	0.18	0.08	0.12	0.2	0.35	0.71	0.68	1.74	1.96
BD37	0.03	0.26	0.02	0.18	0.09	0.74	0.77	0.7	3.1	2.87
BD39	0.12	0.2	0.12	0.15	0.43	1.06	0.97	0.72	3.58	5.22
BD41	18.62	28.29	18.45	27.01	27.38	43.1	0.99	0.95	1.47	1.52
BD43	0.14	0.23	0.11	0.21	0.25	0.59	0.79	0.89	1.77	2.52
BD45	0.1	0.22	0.1	0.17	0.23	0.43	0.94	0.75	2.23	1.93
BD47	0.05	0.49	0.04	0.33	0.11	1.11	0.8	0.68	2.2	2.28
BD49	0.17	0.37	0.19	0.46	0.51	1.23	1.12	1.23	2.93	3.31
BD51	19.59	29.82	17.17	27.62	27.92	42.37	0.88	0.93	1.43	1.42
BD53	0.12	0.18	0.12	0.2	0.33	0.7	1.02	1.15	2.77	3.95
BD55	0.05	0.42	0.04	0.39	0.09	0.9	0.85	0.94	1.91	2.17
BD57	0.01	0.01	0	0.01	0.01	0.03	0.3	1	1.3	2.08
BD59	0.04	0.31	0.04	0.33	0.08	0.69	1	1.05	2.08	2.2
BD61	1.95	22.77	1.7	18.12	3.15	32.87	0.87	0.8	1.62	1.44
BD63	0.89	0.42	0.77	0.38	1.67	0.98	0.87	0.89	1.87	2.32
BD65	0.06	0.07	0.06	0.1	0.18	0.21	1	1.41	3.16	2.88
BD67	0.24	0.38	0.3	0.62	0.78	1.16	1.25	1.63	3.2	3.05
BD69	1.01	0.56	1.06	0.56	2.04	1.25	1.05	0.99	2.03	2.21
BD71	0.2	0.3	0.14	0.16	0.26	0.49	0.7	0.52	1.29	1.63
BD73	0.77	0.3	0.6	0.31	1.28	0.63	0.78	1.03	1.66	2.07
BD75	0.19	0.09	0.21	0.11	0.5	0.3	1.12	1.15	2.69	3.26
BD77	0	0.08	0	0.05	0.01	0.11	1	0.63	3.33	1.38
BD79	0.8	0.44	0.95	0.53	1.63	1.01	1.19	1.2	2.04	2.3
BD81	0.16	0.19	0.13	0.16	0.28	0.39	0.79	0.81	1.73	2.04
BD83	0.25	0.29	0.27	0.32	0.55	0.75	1.08	1.11	2.24	2.6
BD85	1.15	0.65	1.29	0.63	2.45	1.46	1.12	0.97	2.12	2.25
BD87	0.03	0.05	0.03	0.05	0.11	0.15	1.1	1.13	3.57	3.26
BD89	0.04	0.06	0.04	0.05	0.09	0.16	1	0.83	2.25	2.62
BD91	0.77	0.99	0.78	0.88	1.3	2.23	1.01	0.89	1.69	2.25
BD93	0.57	0.24	0.52	0.23	1.43	0.65	0.91	0.95	2.5	2.71
BD95	0.21	0.33	0.22	0.3	0.57	0.85	1.03	0.92	2.66	2.57
BD97	0.21	0.37	0.28	0.4	0.56	0.97	1.3	1.08	2.63	2.61
BD99	0.04	0.07	0.06	0.07	0.15	0.3	1.33	0.96	3.42	4.15
BE31	0.04	0.07	0.21	0.3	0.56	0.83	4.81	4.33	13.02	11.9
BE41	8.85	3.65	7.29	2.92	15.54	6.44	0.82	0.8	1.76	1.76
BE51	0.79	0.48	0.76	0.57	2.13	1.39	0.97	1.19	2.71	2.91
BE61	0.41	0.23	0.42	0.27	1.31	0.8	1.03	1.16	3.23	3.47
BE71	0.6	0.32	0.71	0.44	1.36	0.86	1.18	1.37	2.28	2.65
BE81	0.18	0.32	0.2	0.3	0.42	0.86	1.13	0.93	2.33	2.7
BE91	0.08	0.13	0.01	0.02	0.02	0.05	0.13	0.13	0.3	0.36
CB77	3.51	5.14	0.56	0.76	0.74	1.3	0.16	0.15	0.21	0.25
CB79	2.5	3.54	0.4	0.71	0.56	0.88	0.16	0.2	0.22	0.25
CB87	0.27	0.4	0.29	0.49	0.35	0.79	1.05	1.23	1.29	1.99
CB89	0.22	0.3	0.21	0.43	0.3	0.53	0.98	1.43	1.4	1.76
CB97	0.28	0.42	0.21	0.34	0.29	0.63	0.75	0.81	1.05	1.51
CB99	0.16	0.22	0.13	0.25	0.21	0.42	0.83	1.17	1.34	1.92
CC17	0.44	0.63	2.07	3.05	3.64	5.45	4.73	4.82	8.34	8.61

Appendix A-2c (Continued):

Weather grid	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	0.33	0.47	0.28	0.56	0.6	1.24	0.86	1.21	1.83	2.66
CC25	0.27	0.43	0.27	0.4	0.47	0.82	0.98	0.93	1.71	1.91
CC27	0.24	0.38	0.22	0.33	0.45	0.73	0.92	0.85	1.9	1.91
CC29	5.06	16.26	4.54	17.24	7.96	34.23	0.9	1.06	1.57	2.1
CC35	10.94	19.27	0.38	0.65	0.74	1.53	0.03	0.03	0.07	0.08
CC37	10.75	17.14	0.3	0.55	0.6	1.08	0.03	0.03	0.06	0.06
CC39	19.6	24.09	18.88	22.33	27.59	46.25	0.96	0.93	1.41	1.92
CC43	4.05	23.02	3.98	24.51	6.53	39.76	0.98	1.06	1.61	1.73
CC45	6.5	22.7	6.42	22.83	9.85	42.68	0.99	1.01	1.51	1.88
CC47	5.78	19.31	5.72	18.53	8.75	36.84	0.99	0.96	1.51	1.91
CC49	19.37	11.15	18.25	10.72	29.84	24.43	0.94	0.96	1.54	2.19
CC53	4.15	21.91	3.78	22.94	5.91	33.98	0.91	1.05	1.42	1.55
CC55	4.34	20.8	4.12	19.57	6.4	38.43	0.95	0.94	1.47	1.85
CC57	5.66	20.31	5.31	17.33	8.2	32.19	0.94	0.85	1.45	1.59
CC59	1.34	1.65	1.29	2.06	2.5	3.96	0.96	1.25	1.87	2.4
CC65	3.35	20.56	3.3	22.31	4.84	30.55	0.98	1.09	1.44	1.49
CC67	4.08	17.61	3.87	19.21	5.7	30.84	0.95	1.09	1.4	1.75
CC69	0.75	1.31	0.59	1.09	1.07	2.67	0.79	0.83	1.43	2.03
CC77	17.94	32.63	16.94	26.62	23.98	43.19	0.94	0.82	1.34	1.32
CC79	3.52	17.7	3.02	11.83	5.15	27.77	0.86	0.67	1.46	1.57
CC87	0.58	0.94	0.5	0.92	0.81	1.42	0.86	0.98	1.38	1.51
CC89	5.17	24.24	5.03	20.91	7.45	39.51	0.97	0.86	1.44	1.63
CC97	0.28	0.42	0.28	0.37	0.39	0.72	1	0.89	1.4	1.73
CD11	0.14	0.17	0.13	0.15	0.33	0.58	0.95	0.9	2.36	3.46
CD13	2.35	1.35	1.92	0.98	4.8	3.55	0.82	0.73	2.05	2.63
CD15	0.09	0.62	0.06	0.52	0.2	2.42	0.67	0.83	2.19	3.88
CD17	0.08	0.75	0.09	0.59	0.17	1.51	1.08	0.78	2.08	2.01
CD19	1.68	1.91	1.78	1.87	3.72	4.54	1.06	0.98	2.21	2.38
CD21	13.43	16.64	12.61	18.96	21.54	38.2	0.94	1.14	1.6	2.3
CD23	2.38	1.37	2.46	1.26	4.92	2.92	1.03	0.92	2.07	2.13
CD25	0.11	0.17	0.09	0.11	0.24	0.49	0.87	0.66	2.27	2.92
CD27	0.15	0.94	0.11	0.82	0.26	2.45	0.77	0.87	1.77	2.6
CD29	0.64	2.69	0.59	3.42	1.2	9.03	0.93	1.27	1.88	3.35
CD31	0.97	0.55	1.04	0.53	2.06	1.37	1.07	0.97	2.12	2.49
CD33	0.72	0.39	0.62	0.35	1.31	0.76	0.86	0.89	1.83	1.95
CD35	0.11	0.14	0.09	0.12	0.23	0.47	0.77	0.82	2.04	3.27
CD37	0.12	0.17	0.14	0.25	0.31	0.53	1.14	1.48	2.5	3.19
CD39	0.86	1.27	0.71	0.96	1.45	3.52	0.83	0.75	1.69	2.77
CD41	0.16	0.2	0.13	0.22	0.3	0.38	0.78	1.1	1.82	1.91
CD43	3.17	1.79	2.9	1.66	6.85	4.6	0.91	0.93	2.16	2.56
CD45	0.06	0.08	0.05	0.08	0.17	0.25	0.79	1	2.7	3.01
CD47	0.17	0.25	0.12	0.18	0.31	0.57	0.69	0.74	1.81	2.31
CD49	0.51	0.78	0.45	0.77	1	2.04	0.87	0.99	1.95	2.62
CD51	1.22	1.41	0.98	1.18	2.29	3.71	0.81	0.84	1.87	2.63
CD53	0.01	0.09	0.01	0.13	0.04	0.46	1.3	1.46	4	5.25
CD55	0.06	0.09	0.06	0.09	0.21	0.31	0.95	1.03	3.33	3.44
CD57	0.08	2.68	0.07	2.06	0.16	5.36	0.88	0.77	2	2
CD59	0.1	2.64	0.08	2.62	0.22	6.34	0.8	0.99	2.17	2.4
CD61	2.84	3.42	0.12	0.17	0.27	0.42	0.04	0.05	0.1	0.12
CD63	0.09	0.58	0.07	0.65	0.23	2.06	0.84	1.12	2.61	3.55
CD67	2.69	0.89	2.45	0.91	5.12	2.03	0.91	1.03	1.9	2.28
CD69	0.08	0.11	2.11	2.92	3.74	6.53	27.4	26.52	48.53	59.39
CD71	0.16	0.21	0.14	0.25	0.26	0.49	0.86	1.21	1.61	2.38
CD73	0.09	0.11	0.08	0.12	0.17	0.31	0.89	1.09	1.83	2.85
CD77	4.11	1.3	4.14	1.3	7.28	2.79	1.01	1	1.77	2.14
CD79	0.21	0.25	0.23	0.28	0.41	0.66	1.1	1.12	1.98	2.6
CD81	0.17	0.21	0.14	0.16	0.26	0.4	0.82	0.77	1.53	1.88

Appendix A-2c (Continued):

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	0.64	0.3	0.6	0.33	1.01	0.62	0.94	1.1	1.58	2.05
CD85	0.15	0.19	0.15	0.2	0.27	0.46	0.96	1.07	1.76	2.42
CE11	0.34	0.16	0.33	0.17	0.77	0.53	0.98	1.04	2.28	3.29
CE21	0.01	0.01	0.01	0.02	0.02	0.04	1	2.3	2	4.3
CE31	0.57	0.86	0.51	0.84	0.92	2.13	0.89	0.97	1.62	2.48
CE41	3.46	1.71	3.03	1.3	5.01	3.11	0.88	0.76	1.45	1.82
CE51	0.78	0.88	2.04	2.45	4.37	8.57	2.61	2.77	5.6	9.71
CE61	0.96	1.13	2.67	3.19	4.54	6.78	2.78	2.83	4.73	6.01
CE71	1.01	1.17	2.84	3.56	4.36	6.02	2.81	3.04	4.32	5.15
DB15	1.59	2.51	5.15	7.89	6.29	15.02	3.24	3.14	3.96	5.98
DB17	1.66	2.41	5.39	8.15	6.44	11.54	3.25	3.38	3.88	4.78
DB19	0.12	0.17	0.12	0.16	0.18	0.45	0.98	0.96	1.49	2.66
DB25	0.39	0.55	0.33	0.43	0.46	0.77	0.85	0.77	1.18	1.39
DB27	0.43	0.59	0.36	0.47	0.54	0.73	0.84	0.81	1.25	1.25
DB29	0.41	0.53	0.35	0.44	0.56	0.75	0.85	0.84	1.35	1.41
DC11	0.55	0.24	0.52	0.22	0.8	0.45	0.95	0.92	1.46	1.86
DC13	0.36	0.54	0.37	0.56	0.55	0.92	1.04	1.04	1.55	1.72
DC21	0.27	0.35	0.29	0.36	0.45	0.65	1.1	1.03	1.67	1.88
DC23	0.32	0.42	0.31	0.42	0.48	0.71	0.96	1	1.5	1.7
DC31	0.38	0.48	0.37	0.47	0.52	0.73	0.97	0.99	1.36	1.53
DC33	0.45	0.57	0.47	0.59	0.61	0.81	1.06	1.05	1.36	1.43
DC71	0.27	0.35	0.2	0.24	0.22	0.41	0.74	0.69	0.83	1.17
DC73	0.18	0.23	0.07	0.08	0.13	0.27	0.37	0.34	0.71	1.19
DC75	0.12	0.16	0.09	0.12	0.14	0.17	0.72	0.73	1.14	1.08

Appendix A-2d: Annual water erosion (t/ha) from winter wheat-fallow averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	36.54	48.54	30.56	34.71	35.22	44.34	0.84	0.72	0.96	0.91
BC59	32.64	38.7	32.39	37.57	42.15	50.98	0.99	0.97	1.29	1.32
BC69	33.98	41.01	35.86	42.53	47.43	57.18	1.06	1.04	1.4	1.39
BC79	33.36	42.51	34.55	43.47	37.6	49.48	1.04	1.02	1.13	1.16
BC89	1.09	1.11	0.89	0.91	1.45	1.45	0.82	0.82	1.33	1.31
BC99	0.23	0.24	0.2	0.2	0.43	0.43	0.87	0.83	1.87	1.79
BD31	31.43	37.92	32.12	37.05	45.64	54.71	1.02	0.98	1.45	1.44
BD33	5.4	6	5.35	5.45	10.1	10.44	0.99	0.91	1.87	1.74
BD35	0.14	0.15	0.1	0.1	0.24	0.24	0.71	0.67	1.71	1.6
BD37	0.28	0.29	0.21	0.19	0.79	0.78	0.75	0.66	2.82	2.69
BD39	0.15	0.16	0.14	0.13	0.57	0.53	0.93	0.81	3.8	3.31
BD41	23.32	26.84	21.35	25.48	33.21	38.5	0.92	0.95	1.42	1.43
BD43	0.15	0.15	0.11	0.11	0.29	0.27	0.73	0.73	1.93	1.8
BD45	0.11	0.11	0.11	0.1	0.27	0.27	1	0.91	2.45	2.45
BD47	0.4	0.46	0.32	0.29	0.88	0.86	0.8	0.63	2.2	1.87
BD49	0.25	0.25	0.23	0.22	0.73	0.71	0.92	0.88	2.92	2.84
BD51	23.68	27.4	20.53	22.41	33.03	38.47	0.87	0.82	1.39	1.4
BD53	0.11	0.11	0.13	0.13	0.28	0.27	1.18	1.18	2.55	2.45
BD55	0.39	0.35	0.31	0.29	0.78	0.76	0.79	0.83	2	2.17
BD57	0	0.01	0.01	0	0.01	0.01	0	0	0	1
BD59	0.3	0.34	0.28	0.26	0.63	0.6	0.93	0.76	2.1	1.76
BD61	23.52	26.4	21.36	23.94	33.92	39.18	0.91	0.91	1.44	1.48
BD63	0.11	0.11	0.11	0.11	0.24	0.24	1	1	2.18	2.18
BD65	0.07	0.07	0.07	0.07	0.19	0.2	1	1	2.71	2.86
BD67	0.35	0.33	0.48	0.49	1.08	1.11	1.37	1.48	3.09	3.36
BD69	0.25	0.27	0.26	0.23	0.52	0.54	1.04	0.85	2.08	2
BD71	0.17	0.17	0.16	0.16	0.3	0.3	0.94	0.94	1.76	1.76
BD73	0.12	0.13	0.09	0.09	0.18	0.19	0.75	0.69	1.5	1.46
BD75	0.05	0.04	0.05	0.05	0.11	0.11	1	1.25	2.2	2.75
BD77	0.11	0.12	0.04	0.05	0.06	0.07	0.36	0.42	0.55	0.58
BD79	0.24	0.26	0.24	0.26	0.47	0.42	1	1	1.96	1.62
BD81	0.18	0.17	0.16	0.16	0.32	0.32	0.89	0.94	1.78	1.88
BD83	0.31	0.3	0.29	0.29	0.62	0.62	0.94	0.97	2	2.07
BD85	0.38	0.35	0.41	0.38	0.73	0.72	1.08	1.09	1.92	2.06
BD87	0.04	0.04	0.04	0.05	0.14	0.14	1	1.25	3.5	3.5
BD89	0.06	0.06	0.04	0.04	0.11	0.11	0.67	0.67	1.83	1.83
BD91	0.92	0.92	0.87	0.87	1.51	1.52	0.95	0.95	1.64	1.65
BD93	0.09	0.08	0.09	0.09	0.21	0.22	1	1.13	2.33	2.75
BD95	0.28	0.28	0.32	0.31	0.8	0.87	1.14	1.11	2.86	3.11
BD97	0.33	0.35	0.35	0.34	0.78	0.8	1.06	0.97	2.36	2.29
BD99	0.05	0.05	0.07	0.07	0.16	0.15	1.4	1.4	3.2	3
BE31	0.06	0.06	0.21	0.21	0.59	0.59	3.5	3.5	9.83	9.83
BE41	0.66	0.71	0.57	0.59	1.31	1.3	0.86	0.83	1.98	1.83
BE51	0.21	0.23	0.25	0.22	0.57	0.58	1.19	0.96	2.71	2.52
BE61	0.08	0.11	0.11	0.11	0.36	0.35	1.38	1	4.5	3.18
BE71	0.11	0.12	0.16	0.11	0.35	0.34	1.45	0.92	3.18	2.83
BE81	0.17	0.19	0.25	0.25	0.58	0.54	1.47	1.32	3.41	2.84
BE91	0.09	0.11	0.01	0.01	0.02	0.02	0.11	0.09	0.22	0.18
CB77	3.44	3.82	0.68	0.67	0.75	0.79	0.2	0.18	0.22	0.21
CB79	2.67	2.78	0.49	0.47	0.63	0.67	0.18	0.17	0.24	0.24
CB87	0.28	0.29	0.33	0.32	0.39	0.39	1.18	1.1	1.39	1.34
CB89	0.26	0.26	0.28	0.28	0.34	0.36	1.08	1.08	1.31	1.38
CB97	0.28	0.29	0.26	0.26	0.32	0.33	0.93	0.9	1.14	1.14
CB99	0.18	0.19	0.16	0.17	0.24	0.23	0.89	0.89	1.33	1.21
CC17	0.39	0.4	2.01	2.01	3.78	4	5.15	5.03	9.69	10

Appendix A-2d (Continued):

Weather grid	BL		SN_l		SN_w		SN_l/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	0.35	0.36	0.28	0.29	0.67	0.68	0.8	0.81	1.91	1.89
CC25	0.27	0.26	0.27	0.29	0.45	0.48	1	1.12	1.67	1.85
CC27	0.25	0.26	0.23	0.23	0.48	0.49	0.92	0.88	1.92	1.88
CC29	16.85	18.89	15.32	16.77	24.27	27.43	0.91	0.89	1.44	1.45
CC35	11.98	12.28	0.37	0.39	0.75	0.77	0.03	0.03	0.06	0.06
CC37	12.46	12.46	0.32	0.3	0.59	0.6	0.03	0.02	0.05	0.05
CC39	22.01	24.74	19.87	21.53	27.59	30.8	0.9	0.87	1.25	1.24
CC43	21.13	23.07	20.16	21.79	29.1	33.17	0.95	0.94	1.38	1.44
CC45	22.68	24.62	22.28	26.02	29.05	32.58	0.98	1.06	1.28	1.32
CC47	20.35	22.84	18.85	20.38	27.21	29.78	0.93	0.89	1.34	1.3
CC49	7.62	7.81	6.16	6.24	9.73	9.96	0.81	0.8	1.28	1.28
CC53	20.01	23.13	19.34	20.85	26.46	31.02	0.97	0.9	1.32	1.34
CC55	20.52	25.64	19.17	21.85	27.26	30.84	0.93	0.85	1.33	1.2
CC57	19.11	23.34	18.15	19.15	25.27	27.31	0.95	0.82	1.32	1.17
CC59	1.42	1.48	1.32	1.28	2.55	2.64	0.93	0.86	1.8	1.78
CC65	17.38	20.39	16.82	18.08	23.34	24.96	0.97	0.89	1.34	1.22
CC67	19.01	21.3	18.63	20.16	24.91	27.43	0.98	0.95	1.31	1.29
CC69	1.22	1.29	0.96	0.95	1.63	1.58	0.79	0.74	1.34	1.22
CC77	22.58	30.77	21.83	23.89	28.18	31.58	0.97	0.78	1.25	1.03
CC79	16.1	21.82	15.23	15.19	22.87	24.48	0.95	0.7	1.42	1.12
CC87	0.65	0.81	0.55	0.59	0.94	1.01	0.85	0.73	1.45	1.25
CC89	22.86	32.91	22.86	25.05	31.27	35.54	1	0.76	1.37	1.08
CC97	0.3	0.33	0.3	0.31	0.45	0.46	1	0.94	1.5	1.39
CD11	0.16	0.16	0.17	0.16	0.36	0.37	1.06	1	2.25	2.31
CD13	0.65	0.66	0.59	0.61	1.47	1.37	0.91	0.92	2.26	2.08
CD15	0.62	0.58	0.59	0.62	1.43	1.46	0.95	1.07	2.31	2.52
CD17	0.62	0.64	0.73	0.75	1.25	1.31	1.18	1.17	2.02	2.05
CD19	1.63	1.67	1.57	1.57	3.24	3.27	0.96	0.94	1.99	1.96
CD21	14.12	14.89	13.95	14.59	21.69	23.95	0.99	0.98	1.54	1.61
CD23	0.67	0.67	0.72	0.69	1.39	1.4	1.07	1.03	2.07	2.09
CD25	0.09	0.1	0.1	0.1	0.26	0.28	1.11	1	2.89	2.8
CD27	0.99	1	0.83	0.82	1.75	1.69	0.84	0.82	1.77	1.69
CD29	2.59	2.69	2.42	2.47	4.71	4.78	0.93	0.92	1.82	1.78
CD31	0.22	0.22	0.25	0.26	0.51	0.5	1.14	1.18	2.32	2.27
CD33	0.14	0.14	0.13	0.12	0.28	0.28	0.93	0.86	2	2
CD35	0.14	0.14	0.1	0.11	0.26	0.27	0.71	0.79	1.86	1.93
CD37	0.13	0.13	0.15	0.15	0.32	0.32	1.15	1.15	2.46	2.46
CD39	1.09	1.08	0.92	0.94	1.91	1.91	0.84	0.87	1.75	1.77
CD41	0.24	0.24	0.22	0.22	0.36	0.34	0.92	0.92	1.5	1.42
CD43	1.12	1.15	0.99	0.98	2.21	2.25	0.88	0.85	1.97	1.96
CD45	0.07	0.07	0.07	0.06	0.19	0.18	1	0.86	2.71	2.57
CD47	0.22	0.22	0.15	0.15	0.36	0.37	0.68	0.68	1.64	1.68
CD49	0.64	0.68	0.63	0.54	1.28	1.21	0.98	0.79	2	1.78
CD51	1.34	1.39	1.1	1.1	2.41	2.5	0.82	0.79	1.8	1.8
CD53	0.12	0.12	0.14	0.14	0.31	0.31	1.17	1.17	2.58	2.58
CD55	0.06	0.06	0.07	0.06	0.23	0.23	1.17	1	3.83	3.83
CD57	2.46	2.45	1.92	1.94	4.02	4.04	0.78	0.79	1.63	1.65
CD59	3.24	3.23	2.91	2.81	4.84	4.83	0.9	0.87	1.49	1.5
CD61	2.78	2.85	0.11	0.11	0.28	0.28	0.04	0.04	0.1	0.1
CD63	0.77	0.79	0.59	0.62	1.71	1.78	0.77	0.78	2.22	2.25
CD67	0.15	0.15	0.11	0.11	0.24	0.23	0.73	0.73	1.6	1.53
CD69	0.08	0.08	2.69	2.76	3.98	4.1	33.63	34.5	49.75	51.25
CD71	0.18	0.19	0.15	0.15	0.29	0.3	0.83	0.79	1.61	1.58
CD73	0.1	0.11	0.09	0.08	0.17	0.17	0.9	0.73	1.7	1.55
CD77	0.25	0.26	0.18	0.18	0.36	0.37	0.72	0.69	1.44	1.42
CD79	0.29	0.3	0.29	0.3	0.42	0.45	1	1	1.45	1.5
CD81	0.21	0.26	0.17	0.16	0.29	0.3	0.81	0.62	1.38	1.15

Appendix A-2d (Continued):

Weather grid	BL		SN_t		SN_{φ}		SN_t/BL		SN_{φ}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	0.15	0.15	0.12	0.12	0.22	0.22	0.8	0.8	1.47	1.47
CD85	0.2	0.2	0.17	0.18	0.31	0.32	0.85	0.9	1.55	1.6
CE11	0.07	0.08	0.06	0.06	0.14	0.15	0.86	0.75	2	1.88
CE21	0.01	0.02	0.01	0.01	0.02	0.02	1	0.5	2	1
CE31	0.91	0.92	0.77	0.76	1.19	1.19	0.85	0.83	1.31	1.29
CE41	1.22	1.21	1.13	1.09	1.4	1.42	0.93	0.9	1.15	1.17
CE51	1.07	1.1	2.36	2.33	4.78	4.76	2.21	2.12	4.47	4.33
CE61	1.38	1.39	3.93	3.93	4.59	4.76	2.85	2.83	3.33	3.42
CE71	1.45	1.47	4.2	4.06	4.62	4.42	2.9	2.76	3.19	3.01
DB15	1.58	1.64	5.42	5.5	6.35	6.71	3.43	3.35	4.02	4.09
DB17	1.79	1.85	6.14	6.16	6.95	6.69	3.43	3.33	3.88	3.62
DB19	0.14	0.14	0.15	0.14	0.22	0.22	1.07	1	1.57	1.57
DB25	0.48	0.51	0.39	0.38	0.5	0.51	0.81	0.75	1.04	1
DB27	0.49	0.5	0.39	0.39	0.59	0.6	0.8	0.78	1.2	1.2
DB29	0.43	0.43	0.42	0.42	0.59	0.59	0.98	0.98	1.37	1.37
DC11	0.11	0.11	0.11	0.1	0.17	0.17	1	0.91	1.55	1.55
DC13	0.45	0.46	0.44	0.43	0.58	0.57	0.98	0.93	1.29	1.24
DC21	0.31	0.31	0.36	0.36	0.47	0.45	1.16	1.16	1.52	1.45
DC23	0.35	0.35	0.38	0.38	0.53	0.53	1.09	1.09	1.51	1.51
DC31	0.46	0.46	0.41	0.42	0.57	0.56	0.89	0.91	1.24	1.22
DC33	0.51	0.49	0.54	0.53	0.68	0.66	1.06	1.08	1.33	1.35
DC71	0.38	0.75	0.29	0.29	0.24	0.25	0.76	0.39	0.63	0.33
DC73	0.31	0.71	0.11	0.11	0.12	0.13	0.35	0.15	0.39	0.18
DC75	0.17	0.21	0.13	0.14	0.14	0.14	0.76	0.67	0.82	0.67

Appendix A-3a: Annual continuous wheat yield (t/ha) averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	1.5	1.5	2	2	1.9	1.9	1.33	1.33	1.27	1.27
BC59	1.3	1.3	1.8	1.8	1.7	1.7	1.38	1.38	1.31	1.31
BC69	1.1	1.1	1.7	1.7	1.7	1.6	1.55	1.55	1.55	1.45
BC79	1	1	1.7	1.7	1.6	1.6	1.7	1.7	1.6	1.6
BC89	1.4	1.4	1.9	1.9	1.9	1.9	1.36	1.36	1.36	1.36
BC99	1.2	1.2	1.6	1.6	1.6	1.6	1.33	1.33	1.33	1.33
BD31	1.5	1.5	2.1	2	2	1.9	1.4	1.33	1.33	1.27
BD33	1.7	1.6	2.3	2.2	2.2	2.2	1.35	1.38	1.29	1.38
BD35	1.4	1.4	2	1.9	2	2	1.43	1.36	1.43	1.43
BD37	1.3	1.3	1.8	1.8	2	2	1.38	1.38	1.54	1.54
BD39	1.4	1.4	1.9	1.9	2.1	2.1	1.36	1.36	1.5	1.5
BD41	1.5	1.4	2	2	2	2	1.33	1.43	1.33	1.43
BD43	1.4	1.3	1.8	1.8	1.9	1.9	1.29	1.38	1.36	1.46
BD45	1.2	1.2	1.6	1.6	1.9	1.8	1.33	1.33	1.58	1.5
BD47	1.3	1.3	1.7	1.7	2	2	1.31	1.31	1.54	1.54
BD49	1.3	1.3	1.8	1.8	2	2	1.38	1.38	1.54	1.54
BD51	1.4	1.4	2	2	1.9	1.9	1.43	1.43	1.36	1.36
BD53	1.3	1.3	1.8	1.8	1.9	1.9	1.38	1.38	1.46	1.46
BD55	1.3	1.3	1.7	1.7	2	2	1.31	1.31	1.54	1.54
BD57	1.1	1.1	1.4	1.4	1.6	1.6	1.27	1.27	1.45	1.45
BD59	1.3	1.3	1.8	1.8	2	2	1.38	1.38	1.54	1.54
BD61	1.6	1.6	2.2	2.2	2.1	2.1	1.38	1.38	1.31	1.31
BD63	1.3	1.3	1.8	1.8	1.8	1.8	1.38	1.38	1.38	1.38
BD65	1.4	1.4	1.9	1.8	2.1	2.1	1.36	1.29	1.5	1.5
BD67	1.3	1.3	1.7	1.7	1.9	1.9	1.31	1.31	1.46	1.46
BD69	1.1	1.1	1.6	1.5	1.9	1.9	1.45	1.36	1.73	1.73
BD71	1.7	1.7	2.4	2.4	2.4	2.4	1.41	1.41	1.41	1.41
BD73	1.4	1.4	1.8	1.8	1.8	1.8	1.29	1.29	1.29	1.29
BD75	1.3	1.3	1.7	1.7	1.9	1.9	1.31	1.31	1.46	1.46
BD77	1.1	1.1	1.5	1.5	1.5	1.5	1.36	1.36	1.36	1.36
BD79	1.2	1.2	1.7	1.7	1.9	1.9	1.42	1.42	1.58	1.58
BD81	1.8	1.9	2.4	2.5	2.4	2.5	1.33	1.32	1.33	1.32
BD83	1.5	1.6	1.9	1.9	2	2	1.27	1.19	1.33	1.25
BD85	1.6	1.6	2.2	2.2	2.2	2.3	1.38	1.38	1.38	1.44
BD87	1.2	1.2	1.6	1.5	1.7	1.7	1.33	1.25	1.42	1.42
BD89	1.2	1.2	1.5	1.5	1.7	1.7	1.25	1.25	1.42	1.42
BD91	1.6	1.7	2.1	2.1	2.1	2.1	1.31	1.24	1.31	1.24
BD93	1.9	1.9	2.5	2.5	2.5	2.5	1.32	1.32	1.32	1.32
BD95	1.7	1.7	2.2	2.2	2.2	2.2	1.29	1.29	1.29	1.29
BD97	1.4	1.5	1.9	1.9	1.9	1.9	1.36	1.27	1.36	1.27
BD99	1.3	1.3	1.6	1.5	1.7	1.7	1.23	1.15	1.31	1.31
BE31	1.3	1.3	1.8	1.8	2	2	1.38	1.38	1.54	1.54
BE41	1.2	1.2	1.7	1.7	1.8	1.8	1.42	1.42	1.5	1.5
BE51	1.2	1.2	1.7	1.7	2	2	1.42	1.42	1.67	1.67
BE61	1.1	1.1	1.5	1.4	1.9	1.9	1.36	1.27	1.73	1.73
BE71	1.1	1.2	1.6	1.6	1.9	1.9	1.45	1.33	1.73	1.58
BE81	1.2	1.2	1.7	1.7	1.9	1.9	1.42	1.42	1.58	1.58
BE91	1.1	1.1	1.4	1.4	1.6	1.6	1.27	1.27	1.45	1.45
CB77	1.3	1.3	1.6	1.6	1.6	1.6	1.23	1.23	1.23	1.23
CB79	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
CB87	1.7	1.7	2.2	2.2	2.2	2.2	1.29	1.29	1.29	1.29
CB89	1.8	1.8	2.3	2.3	2.2	2.2	1.28	1.28	1.22	1.22
CB97	1.7	1.7	2.2	2.2	2.1	2.1	1.29	1.29	1.24	1.24
CB99	1.7	1.8	2.2	2.2	2.2	2.2	1.29	1.22	1.29	1.22
CC17	1.1	1.1	1.5	1.5	1.5	1.5	1.36	1.36	1.36	1.36

Appendix A-3a (Continued):

Weather grid	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	1.3	1.3	1.6	1.6	1.6	1.6	1.23	1.23	1.23	1.23
CC25	0.9	0.9	1.4	1.4	1.4	1.4	1.56	1.56	1.56	1.56
CC27	1.2	1.2	1.6	1.6	1.5	1.5	1.33	1.33	1.25	1.25
CC29	1.4	1.4	1.7	1.7	1.7	1.7	1.21	1.21	1.21	1.21
CC35	1.2	1.2	1.5	1.5	1.5	1.5	1.25	1.25	1.25	1.25
CC37	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
CC39	1.4	1.4	1.7	1.7	1.7	1.7	1.21	1.21	1.21	1.21
CC43	1.3	1.3	1.6	1.6	1.6	1.6	1.23	1.23	1.23	1.23
CC45	1.4	1.4	1.6	1.6	1.7	1.6	1.14	1.14	1.21	1.14
CC47	1.4	1.4	1.7	1.7	1.7	1.7	1.21	1.21	1.21	1.21
CC49	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
CC53	1.3	1.3	1.6	1.6	1.6	1.6	1.23	1.23	1.23	1.23
CC55	1.3	1.3	1.6	1.6	1.6	1.6	1.23	1.23	1.23	1.23
CC57	1.4	1.4	1.6	1.6	1.7	1.7	1.14	1.14	1.21	1.21
CC59	1.4	1.4	1.7	1.6	1.7	1.7	1.21	1.14	1.21	1.21
CC65	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
CC67	1.4	1.4	1.6	1.6	1.7	1.7	1.14	1.14	1.21	1.21
CC69	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
CC77	1.3	1.3	1.6	1.6	1.6	1.6	1.23	1.23	1.23	1.23
CC79	1.4	1.4	1.6	1.6	1.7	1.7	1.14	1.14	1.21	1.21
CC87	1.3	1.3	1.5	1.5	1.5	1.5	1.15	1.15	1.15	1.15
CC89	1.4	1.4	1.6	1.6	1.7	1.6	1.14	1.14	1.21	1.14
CC97	1.3	1.3	1.5	1.5	1.6	1.6	1.15	1.15	1.23	1.23
CD11	1.7	1.7	2.2	2.2	2.2	2.2	1.29	1.29	1.29	1.29
CD13	1.7	1.7	2.1	2.1	2.1	2.1	1.24	1.24	1.24	1.24
CD15	1.5	1.5	1.9	1.9	1.9	1.9	1.27	1.27	1.27	1.27
CD17	1.5	1.5	1.9	1.9	1.9	1.9	1.27	1.27	1.27	1.27
CD19	1.5	1.5	1.9	1.9	2	2	1.27	1.27	1.33	1.33
CD21	1.4	1.4	1.7	1.7	1.7	1.7	1.21	1.21	1.21	1.21
CD23	1.7	1.7	2.1	2.1	2.1	2.1	1.24	1.24	1.24	1.24
CD25	1.6	1.6	2.1	2.1	2.1	2.1	1.31	1.31	1.31	1.31
CD27	1.8	1.8	2.3	2.3	2.3	2.4	1.28	1.28	1.28	1.33
CD29	1.6	1.6	2	2	2	2	1.25	1.25	1.25	1.25
CD31	1.4	1.4	1.7	1.7	1.7	1.7	1.21	1.21	1.21	1.21
CD33	2.3	2.3	3	3	2.9	3	1.3	1.3	1.26	1.3
CD35	1.7	1.7	2.1	2.1	2.1	2.1	1.24	1.24	1.24	1.24
CD37	1.6	1.6	2.1	2.1	2.1	2.1	1.31	1.31	1.31	1.31
CD39	1.7	1.7	2.3	2.3	2.3	2.3	1.35	1.35	1.35	1.35
CD41	1.8	1.8	2.2	2.2	2.2	2.2	1.22	1.22	1.22	1.22
CD43	1.4	1.4	1.7	1.7	1.7	1.7	1.21	1.21	1.21	1.21
CD45	2.3	2.3	3	3	3	3	1.3	1.3	1.3	1.3
CD47	1.7	1.7	2.1	2.1	2.1	2.1	1.24	1.24	1.24	1.24
CD49	1.8	1.8	2.3	2.3	2.3	2.3	1.28	1.28	1.28	1.28
CD51	1.4	1.4	1.7	1.7	1.7	1.7	1.21	1.21	1.21	1.21
CD53	1.8	1.8	2.4	2.4	2.4	2.4	1.33	1.33	1.33	1.33
CD55	2.2	2.2	2.9	3	2.9	3	1.32	1.36	1.32	1.36
CD57	1.8	1.8	2.4	2.4	2.4	2.4	1.33	1.33	1.33	1.33
CD59	1.7	1.8	2.3	2.3	2.3	2.4	1.35	1.28	1.35	1.33
CD61	1.6	1.6	2	2	2	2	1.25	1.25	1.25	1.25
CD63	1.4	1.4	1.7	1.7	1.7	1.7	1.21	1.21	1.21	1.21
CD67	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
CD69	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
CD71	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
CD73	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
CD77	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
CD79	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
CD81	1.4	1.3	1.6	1.6	1.6	1.6	1.14	1.23	1.14	1.23

Appendix A-3a (Continued):

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
CD85	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
CE11	1.4	1.4	1.7	1.7	1.7	1.8	1.21	1.21	1.21	1.29
CE21	1.3	1.3	1.6	1.6	1.7	1.7	1.23	1.23	1.31	1.31
CE31	1.7	1.7	2.2	2.2	2.3	2.3	1.29	1.29	1.35	1.35
CE41	1.8	1.8	2.3	2.3	2.3	2.3	1.28	1.28	1.28	1.28
CE51	1.4	1.4	1.7	1.7	1.7	1.7	1.21	1.21	1.21	1.21
CE61	1.4	1.4	1.6	1.6	1.7	1.7	1.14	1.14	1.21	1.21
CE71	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
DB15	1.3	1.3	1.6	1.6	1.6	1.6	1.23	1.23	1.23	1.23
DB17	1.4	1.4	1.6	1.6	1.6	1.6	1.14	1.14	1.14	1.14
DB19	1.8	1.8	2.3	2.3	2.2	2.2	1.28	1.28	1.22	1.22
DB25	1.5	1.5	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2
DB27	1.4	1.4	1.7	1.7	1.8	1.8	1.21	1.21	1.29	1.29
DB29	1.5	1.5	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2
DC11	1.3	1.3	1.5	1.5	1.5	1.6	1.15	1.15	1.15	1.23
DC13	1.5	1.5	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2
DC21	1.5	1.5	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2
DC23	1.7	1.7	2.2	2.2	2.2	2.2	1.29	1.29	1.29	1.29
DC31	1.6	1.6	1.9	1.9	1.9	2	1.19	1.19	1.19	1.25
DC33	1.7	1.8	2.2	2.2	2.2	2.2	1.29	1.22	1.29	1.22
DC71	1.2	1.2	1.4	1.4	1.4	1.5	1.17	1.17	1.17	1.25
DC73	1.2	1.2	1.4	1.4	1.4	1.4	1.17	1.17	1.17	1.17
DC75	1.3	1.3	1.4	1.5	1.5	1.5	1.08	1.15	1.15	1.15

Appendix A-3b: Annual wheat yield (t/ha) from wheat-fallow averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	1.8	1.65	2.45	2.25	2.3	2	1.36	1.36	1.28	1.21
BC59	1.55	1.4	2.3	2.1	2.1	1.9	1.48	1.5	1.35	1.36
BC69	1.3	1.25	2.2	2	1.95	1.8	1.69	1.6	1.5	1.44
BC79	1.2	1.2	2.15	2.1	2.1	1.95	1.79	1.75	1.75	1.63
BC89	1.9	1.9	2.6	2.65	2.5	2.5	1.37	1.39	1.32	1.32
BC99	1.5	1.5	2	2	1.8	1.85	1.33	1.33	1.2	1.23
BD31	1.8	1.65	2.5	2.3	2.2	1.95	1.39	1.39	1.22	1.18
BD33	2.25	2.1	2.9	2.75	2.55	2.45	1.29	1.31	1.13	1.17
BD35	2	1.9	2.7	2.55	2.5	2.4	1.35	1.34	1.25	1.26
BD37	2.05	2.05	2.8	2.7	2.8	2.75	1.37	1.32	1.37	1.34
BD39	2.1	2.1	2.85	2.8	2.8	2.85	1.36	1.33	1.33	1.36
BD41	2.05	1.9	2.7	2.5	2.55	2.25	1.32	1.32	1.24	1.18
BD43	1.9	1.8	2.45	2.25	2.35	2.15	1.29	1.25	1.24	1.19
BD45	1.8	1.65	2.45	2.2	2.45	2.2	1.36	1.33	1.36	1.33
BD47	2	2	2.65	2.55	2.7	2.65	1.33	1.27	1.35	1.33
BD49	2.1	2.1	2.7	2.65	2.7	2.7	1.29	1.26	1.29	1.29
BD51	1.9	1.8	2.65	2.55	2.5	2.25	1.39	1.42	1.32	1.25
BD53	1.8	1.7	2.35	2.2	2.3	2.15	1.31	1.29	1.28	1.26
BD55	2.05	2	2.7	2.6	2.7	2.7	1.32	1.3	1.32	1.35
BD57	1.65	1.6	2	1.9	2.1	2	1.21	1.19	1.27	1.25
BD59	2.05	2.05	2.7	2.65	2.7	2.7	1.32	1.29	1.32	1.32
BD61	2.15	2.2	2.9	2.9	2.7	2.7	1.35	1.32	1.26	1.23
BD63	1.9	1.85	2.4	2.3	2.35	2.3	1.26	1.24	1.24	1.24
BD65	2.2	2.15	2.8	2.75	2.8	2.75	1.27	1.28	1.27	1.28
BD67	1.95	1.95	2.45	2.45	2.45	2.45	1.26	1.26	1.26	1.26
BD69	1.75	1.75	2.4	2.35	2.6	2.6	1.37	1.34	1.49	1.49
BD71	2.55	2.6	3.35	3.45	3.1	3.2	1.31	1.33	1.22	1.23
BD73	1.95	1.95	2.4	2.4	2.35	2.3	1.23	1.23	1.21	1.18
BD75	2	2	2.55	2.5	2.6	2.6	1.27	1.25	1.3	1.3
BD77	1.2	0	1.75	1.65	1.8	1.7	1.46	0	1.5	0
BD79	1.85	1.8	2.5	2.5	2.6	2.6	1.35	1.39	1.41	1.44
BD81	2.65	2.7	3.25	3.35	3	3.1	1.23	1.24	1.13	1.15
BD83	2.2	2.2	2.7	2.7	2.65	2.7	1.23	1.23	1.2	1.23
BD85	2.4	2.4	3	3.05	2.9	2.95	1.25	1.27	1.21	1.23
BD87	1.85	1.85	2.25	2.25	2.3	2.3	1.22	1.22	1.24	1.24
BD89	1.75	1.75	2.2	2.25	2.3	2.3	1.26	1.29	1.31	1.31
BD91	2.3	2.3	2.7	2.8	2.6	2.6	1.17	1.22	1.13	1.13
BD93	2.75	2.8	3.2	3.35	3	3.1	1.16	1.2	1.09	1.11
BD95	2.4	2.5	2.95	3	2.9	2.9	1.23	1.2	1.21	1.16
BD97	2.1	2.1	2.55	2.6	2.4	2.5	1.21	1.24	1.14	1.19
BD99	1.9	1.9	2.2	2.25	2.2	2.2	1.16	1.18	1.16	1.16
BE31	2	2	2.8	2.8	2.9	2.9	1.4	1.4	1.45	1.45
BE41	1.9	1.8	2.5	2.4	2.5	2.45	1.32	1.33	1.32	1.36
BE51	1.95	1.85	2.65	2.55	2.7	2.7	1.36	1.38	1.38	1.46
BE61	1.65	1.6	2.3	2.2	2.7	2.7	1.39	1.38	1.64	1.69
BE71	1.75	1.7	2.45	2.35	2.65	2.65	1.4	1.38	1.51	1.56
BE81	1.85	1.85	2.55	2.5	2.6	2.6	1.38	1.35	1.41	1.41
BE91	1.6	1.6	2.1	2	2.1	2.05	1.31	1.25	1.31	1.28
CB77	1.6	1.6	2	2	1.8	1.8	1.25	1.25	1.13	1.13
CB79	1.65	1.65	1.9	1.95	1.7	1.75	1.15	1.18	1.03	1.06
CB87	2.3	2.4	2.85	2.9	2.6	2.6	1.24	1.21	1.13	1.08
CB89	2.4	2.4	2.9	2.9	2.65	2.7	1.21	1.21	1.1	1.13
CB97	2.3	2.3	2.85	2.9	2.7	2.7	1.24	1.26	1.17	1.17
CB99	2.4	2.5	2.9	3	2.7	2.75	1.21	1.2	1.13	1.1
CC17	1.15	1.15	1.9	1.9	1.7	1.7	1.65	1.65	1.48	1.48

Appendix A-3b (Continued):

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	1.7	1.7	2.1	2.1	1.95	1.95	1.24	1.24	1.15	1.15
CC25	0.95	0.95	1.7	1.7	1.5	1.5	1.79	1.79	1.58	1.58
CC27	1.4	1.4	1.85	1.9	1.65	1.65	1.32	1.36	1.18	1.18
CC29	1.85	1.8	2.3	2.3	2.2	2.15	1.24	1.28	1.19	1.19
CC35	1.55	1.5	2	2	1.8	1.8	1.29	1.33	1.16	1.2
CC37	1.7	1.7	1.95	2	1.8	1.85	1.15	1.18	1.06	1.09
CC39	1.9	1.85	2.3	2.2	2.2	2.1	1.21	1.19	1.16	1.14
CC43	1.65	1.65	2.1	2.1	2	2	1.27	1.27	1.21	1.21
CC45	1.8	1.8	2.2	2.2	2.05	2	1.22	1.22	1.14	1.11
CC47	1.8	1.8	2.2	2.2	2.1	2.1	1.22	1.22	1.17	1.17
CC49	1.8	1.8	2.1	2.1	2.1	1.9	1.17	1.17	1.17	1.06
CC53	1.65	1.6	2.1	2.1	2	2	1.27	1.31	1.21	1.25
CC55	1.75	1.75	2.15	2.15	2.1	2.05	1.23	1.23	1.2	1.17
CC57	1.8	1.8	2.2	2.2	2.1	2.1	1.22	1.22	1.17	1.17
CC59	1.85	1.85	2.15	2.15	1.95	1.95	1.16	1.16	1.05	1.05
CC65	1.7	1.7	2.05	2.05	1.9	1.9	1.21	1.21	1.12	1.12
CC67	1.8	1.8	2.2	2.2	2.1	2.1	1.22	1.22	1.17	1.17
CC69	1.8	1.8	2.1	2.1	1.9	1.95	1.17	1.17	1.06	1.08
CC77	1.65	1.6	2.1	2.1	2	2	1.27	1.31	1.21	1.25
CC79	1.8	1.8	2.25	2.25	2.2	2.15	1.25	1.25	1.22	1.19
CC87	1.45	1.5	1.85	1.9	1.7	1.7	1.28	1.27	1.17	1.13
CC89	1.75	1.75	2.2	2.2	2.1	2.1	1.26	1.26	1.2	1.2
CC97	1.7	1.7	2	2	1.85	1.9	1.18	1.18	1.09	1.12
CD11	2.4	2.5	2.8	2.8	2.6	2.6	1.17	1.12	1.08	1.04
CD13	2.3	2.4	2.95	3	2.65	2.65	1.28	1.25	1.15	1.1
CD15	2.1	2.1	2.5	2.6	2.3	2.4	1.19	1.24	1.1	1.14
CD17	2.1	2.1	2.5	2.6	2.35	2.35	1.19	1.24	1.12	1.12
CD19	2.2	2.2	2.7	2.7	2.6	2.6	1.23	1.23	1.18	1.18
CD21	1.9	1.9	2.3	2.3	2.2	2.2	1.21	1.21	1.16	1.16
CD23	2.4	2.4	2.8	2.8	2.6	2.6	1.17	1.17	1.08	1.08
CD25	2.3	2.4	2.8	2.9	2.65	2.7	1.22	1.21	1.15	1.13
CD27	2.6	2.7	3.3	3.35	3.1	3.2	1.27	1.24	1.19	1.19
CD29	2.15	2.15	2.5	2.5	2.3	2.35	1.16	1.16	1.07	1.09
CD31	1.95	2	2.3	2.35	2.25	2.3	1.18	1.17	1.15	1.15
CD33	3.4	3.55	3.75	3.65	3.45	3.55	1.1	1.08	1.01	1
CD35	2.3	2.3	2.65	2.7	2.4	2.5	1.15	1.17	1.04	1.09
CD37	2.3	2.35	2.85	2.85	2.6	2.7	1.24	1.21	1.13	1.15
CD39	2.55	2.6	3.25	3.25	3.1	3.15	1.27	1.25	1.22	1.21
CD41	2.45	2.45	2.7	2.75	2.5	2.55	1.1	1.12	1.02	1.04
CD43	1.9	1.9	2.3	2.3	2.1	2.1	1.21	1.21	1.11	1.11
CD45	3.4	3.55	3.75	3.85	3.5	3.55	1.1	1.08	1.03	1
CD47	2.25	2.3	2.65	2.75	2.45	2.5	1.18	1.2	1.09	1.09
CD49	2.6	2.65	3.2	3.3	3.1	3.2	1.23	1.25	1.19	1.21
CD51	1.9	1.9	2.2	2.2	2	2	1.16	1.16	1.05	1.05
CD53	2.7	2.7	3.4	3.4	3.2	3.3	1.26	1.26	1.19	1.22
CD55	3.4	3.5	3.85	3.95	3.55	3.65	1.13	1.13	1.04	1.04
CD57	2.6	2.65	3.35	3.35	3.1	3.15	1.29	1.26	1.19	1.19
CD59	2.6	2.65	3.35	3.4	3.15	3.25	1.29	1.28	1.21	1.23
CD61	2.2	2.25	2.7	2.75	2.4	2.5	1.23	1.22	1.09	1.11
CD63	1.85	1.9	2.2	2.2	2	2.05	1.19	1.16	1.08	1.08
CD67	1.8	1.8	2.1	2.15	2	2	1.17	1.19	1.11	1.11
CD69	1.75	1.75	1.95	1.95	1.9	1.9	1.11	1.11	1.09	1.09
CD71	1.7	1.8	2	2.1	1.9	1.9	1.18	1.17	1.12	1.06
CD73	1.75	1.75	2	2	1.85	1.85	1.14	1.14	1.06	1.06
CD77	1.8	1.75	2.1	2.1	1.9	1.9	1.17	1.2	1.06	1.09
CD79	1.8	1.8	2.15	2.2	2	2	1.19	1.22	1.11	1.11
CD81	1.7	1.7	2	2	1.9	1.9	1.18	1.18	1.12	1.12

Appendix A-3b (Continued):

Weather grid	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	1.8	1.8	2.1	2.1	1.9	1.95	1.17	1.17	1.06	1.08
CD85	1.7	1.8	2	2.1	1.85	1.9	1.18	1.17	1.09	1.06
CE11	1.9	1.9	2.25	2.25	2.2	2.2	1.18	1.18	1.16	1.16
CE21	1.85	1.9	2.15	2.2	2.05	2.1	1.16	1.16	1.11	1.11
CE31	2.5	2.55	3.15	3.25	3	3.1	1.26	1.27	1.2	1.22
CE41	2.5	2.6	3.1	3.2	3	3.05	1.24	1.23	1.2	1.17
CE51	1.9	1.9	2.25	2.3	2.1	2.1	1.18	1.21	1.11	1.11
CE61	1.9	1.9	2.25	2.3	2.1	2.1	1.18	1.21	1.11	1.11
CE71	1.8	1.85	2.2	2.2	2.1	2.1	1.22	1.19	1.17	1.14
DB15	1.7	1.75	2.1	2.1	2	2	1.24	1.2	1.18	1.14
DB17	1.8	1.8	2.1	2.1	2	2	1.17	1.17	1.11	1.11
DB19	2.45	2.5	2.95	3	2.75	2.8	1.2	1.2	1.12	1.12
DB25	2	2	2.4	2.4	2.3	2.3	1.2	1.2	1.15	1.15
DB27	1.95	2	2.4	2.4	2.3	2.4	1.23	1.2	1.18	1.2
DB29	2	2	2.45	2.45	2.35	2.35	1.23	1.23	1.17	1.17
DC11	1.75	1.8	2.05	2.1	2	2	1.17	1.17	1.14	1.11
DC13	2.1	2.1	2.5	2.5	2.35	2.4	1.19	1.19	1.12	1.14
DC21	2.05	2.1	2.5	2.5	2.4	2.45	1.22	1.19	1.17	1.17
DC23	2.55	2.65	3.2	3.3	3.1	3.2	1.25	1.25	1.22	1.21
DC31	2.2	2.3	2.7	2.8	2.65	2.7	1.23	1.22	1.2	1.17
DC33	2.55	2.6	3.2	3.3	3.1	3.2	1.25	1.27	1.22	1.23
DC71	1.55	1.6	1.8	1.9	1.8	1.8	1.16	1.19	1.16	1.13
DC73	1.5	1.5	1.8	1.8	1.7	1.7	1.2	1.2	1.13	1.13
DC75	1.6	1.7	1.9	1.95	1.85	1.9	1.19	1.15	1.16	1.12

Appendix A-3c: Annual canola yield (t/ha) from canola-wheat-fallow averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Weather grid	BL		SN_t		SN_{tp}		SN/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	1.3	1.33	2.8	2.8	2.33	2.23	2.15	2.1	1.79	1.68
BC59	0.83	0.83	2.93	2.3	2	1.7	3.52	2.76	2.4	2.04
BC69	0.63	0.6	1.57	1.47	1.4	1.47	2.48	2.44	2.21	2.44
BC79	0.57	0.53	1.3	1.23	1.2	0.8	2.29	2.31	2.12	1.5
BC89	1	0.97	2.8	3	2.3	1.77	2.8	3.1	2.3	1.83
BC99	0.67	0.67	1.83	1.77	2	1.33	2.75	2.65	3	2
BD31	1.03	0.7	2.17	1.73	2.33	1.4	2.1	2.48	2.26	2
BD33	1.47	1.3	2.23	1.67	2.3	1.63	1.52	1.28	1.57	1.26
BD35	1.67	1.7	2.57	2.43	1.73	1.73	1.54	1.43	1.04	1.02
BD37	1.6	1.43	2.43	2.1	1.87	1.77	1.52	1.47	1.17	1.23
BD39	1.9	1.97	2.53	2.33	2.67	1.77	1.33	1.19	1.4	0.9
BD41	2.13	1.77	3.13	2.8	2.53	2.47	1.47	1.58	1.19	1.4
BD43	1.7	1.63	1.87	1.93	2	1.67	1.1	1.18	1.18	1.02
BD45	2.1	1.87	1.93	1.7	2.5	1.8	0.92	0.91	1.19	0.96
BD47	1.57	1.6	1.83	1.5	1.63	1.27	1.17	0.94	1.04	0.79
BD49	1.5	1.6	2.07	2.13	1.83	1.5	1.38	1.33	1.22	0.94
BD51	1.27	1.2	2.9	2.4	3.1	2.9	2.29	2	2.45	2.42
BD53	1.33	1.5	1.93	1.87	1.17	1.3	1.45	1.24	0.88	0.87
BD55	2.1	2	2.43	2.33	1.9	1.3	1.16	1.17	0.9	0.65
BD57	2	1.87	2.4	1.87	1.77	1.73	1.2	1	0.88	0.93
BD59	1.6	1.43	2.3	1.93	1.67	1.7	1.44	1.35	1.04	1.19
BD61	1.73	1.6	3.17	3.23	2.27	2.3	1.83	2.02	1.31	1.44
BD63	2.2	1.83	1.9	2.07	2.13	1.8	0.86	1.13	0.97	0.98
BD65	2.37	2.33	2.57	2.07	1.87	1.87	1.08	0.89	0.79	0.8
BD67	2.2	1.93	2.53	2	2.63	2.4	1.15	1.03	1.2	1.24
BD69	1.63	1.6	1.93	1.8	2.3	1.77	1.18	1.13	1.41	1.1
BD71	2.4	1.97	3.67	2.97	2.2	1.8	1.53	1.51	0.92	0.92
BD73	2.37	2.43	2.93	2.37	2.97	2.53	1.24	0.97	1.25	1.04
BD75	2.37	2.4	2.13	2.2	2.2	1.53	0.9	0.92	0.93	0.64
BD77	0.83	1	1.27	1.2	1.67	1.63	1.52	1.2	2	1.63
BD79	1.63	1.5	2.17	2.17	2.5	2.4	1.33	1.44	1.53	1.6
BD81	3	2.47	2.97	2.87	2.23	2	0.99	1.16	0.74	0.81
BD83	2.8	2.6	2.93	3.03	2.87	2.3	1.05	1.17	1.02	0.88
BD85	2.67	2.37	2.8	2.57	2.37	1.77	1.05	1.08	0.89	0.75
BD87	1.8	1.5	2.53	2	2.33	2	1.41	1.33	1.3	1.33
BD89	1.67	1.7	2.63	2.37	2.97	2.57	1.58	1.39	1.78	1.51
BD91	2.97	2.53	3.9	3.03	2.9	2.1	1.31	1.2	0.98	0.83
BD93	3.13	2.83	3.13	2.97	2.13	1.87	1	1.05	0.68	0.66
BD95	2.8	2.13	2.27	2.4	2.07	1.97	0.81	1.13	0.74	0.92
BD97	2.67	2.57	3.1	2.2	1.83	1.87	1.16	0.86	0.69	0.73
BD99	2.07	2	2.87	2.73	2.47	1.53	1.39	1.37	1.19	0.77
BE31	1.53	1.5	2.5	2.1	2.2	1.7	1.63	1.4	1.44	1.13
BE41	1.37	1.43	2.73	1.83	1.8	1.27	2	1.28	1.32	0.88
BE51	1.73	1.7	2.07	1.83	2.37	1.73	1.19	1.08	1.37	1.02
BE61	1.57	1.4	2.17	1.8	1.9	2.03	1.38	1.29	1.21	1.45
BE71	1.53	1.23	2.23	1.83	1.97	1.73	1.46	1.49	1.28	1.41
BE81	1.87	1.73	2.67	2.3	2.87	1.83	1.43	1.33	1.54	1.06
BE91	1.77	1.43	2.5	1.97	2.07	1.53	1.41	1.37	1.17	1.07
CB77	0.87	0.8	2.5	1.57	2.03	1.2	2.88	1.96	2.34	1.5
CB79	1.23	0.9	2.03	1.53	2	1.3	1.65	1.7	1.62	1.44
CB87	1.73	1.4	3.17	2.03	2.07	1.33	1.83	1.45	1.19	0.95
CB89	2.3	1.53	2.63	1.87	2.07	1.43	1.14	1.22	0.9	0.93
CB97	1.73	1.3	2.77	1.9	2.13	1.37	1.6	1.46	1.23	1.05
CB99	2.2	1.57	3.23	2.17	1.93	1.23	1.47	1.38	0.88	0.79
CC17	0.57	0.57	1	0.87	1.1	1.03	1.76	1.53	1.94	1.82

Appendix A-3c (Continued):

Weather grid	BL		SN_t		SN_{φ}		SN/BL		SN_{φ}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	1.1	0.73	1.87	1.53	2	1	1.7	2.09	1.82	1.36
CC25	0.5	0.5	1.1	0.97	0.97	0.8	2.2	1.93	1.93	1.6
CC27	0.9	0.63	1.87	1.37	2.07	1.33	2.07	2.16	2.3	2.11
CC29	1.67	1.5	1.83	2	1.97	1.07	1.1	1.33	1.18	0.71
CC35	0.93	0.73	1.87	1.1	1.9	0.97	2	1.5	2.04	1.32
CC37	1.33	0.97	1.87	1.2	1.53	1.2	1.4	1.24	1.15	1.24
CC39	2.27	1.87	3.23	3.27	2	1.5	1.43	1.75	0.88	0.8
CC43	1	0.9	1.83	1.23	1.83	1.03	1.83	1.37	1.83	1.15
CC45	1.5	1.27	2.93	1.73	1.93	1.2	1.96	1.37	1.29	0.95
CC47	1.9	1.73	3.57	3.13	1.93	1.17	1.88	1.81	1.02	0.67
CC49	3.27	2.83	4.03	3.07	3.4	2.17	1.23	1.08	1.04	0.76
CC53	0.93	0.9	2.97	1.77	1.93	1.2	3.18	1.96	2.07	1.33
CC55	1.3	1.23	2.7	3.1	2.13	1.23	2.08	2.51	1.64	1
CC57	1.8	1.47	2.73	2.1	1.9	1.43	1.52	1.43	1.06	0.98
CC59	3.37	2.67	3.17	2.4	2	1.43	0.94	0.9	0.59	0.54
CC65	1.17	1	1.83	1.17	1.93	1.17	1.57	1.17	1.66	1.17
CC67	2.07	2.13	2.9	2.6	2.37	2	1.4	1.22	1.15	0.94
CC69	3.1	2.27	3.2	2.4	2.07	1.23	1.03	1.06	0.67	0.54
CC77	1.5	1.13	2.93	1.8	1.93	1.07	1.96	1.59	1.29	0.94
CC79	2.27	1.6	2.97	2.57	2.27	2.03	1.31	1.6	1	1.27
CC87	1.17	0.9	1.97	1	2.13	1.13	1.69	1.11	1.83	1.26
CC89	2.1	1.57	1.77	2.17	2.1	1.13	0.84	1.38	1	0.72
CC97	2.67	1.9	2.23	2	1.93	1.33	0,84	1.05	0.72	0.7
CD11	2.9	2.43	2.03	2.07	2.17	1.67	0.7	0.85	0.75	0.69
CD13	2.7	2	2.83	2.4	2.03	1.2	1.05	1.2	0.75	0.6
CD15	2.5	2.13	3.2	2.67	2	1.03	1.28	1.25	0.8	0.48
CD17	2.87	2.27	3.47	3.17	2.03	1.57	1.21	1.4	0.71	0.69
CD19	2.63	2.3	3.53	3.43	1.9	1.83	1.34	1.49	0.72	0.8
CD21	3.23	2.8	3.77	2.73	2.3	1.63	1.17	0.98	0.71	0.58
CD23	3.2	2.83	2.53	2.13	2.03	1.87	0.79	0.75	0.64	0.66
CD25	2.77	2.2	1.8	1.67	2	1.3	0.65	0.76	0.72	0.59
CD27	2.77	2.53	2.07	1.9	2.17	1.33	0.75	0.75	0.78	0.53
CD29	2.6	2.1	2.97	2.07	2.07	1.3	1.14	0.98	0.8	0.62
CD31	3.43	2.5	2	1.53	2.03	1	0.58	0.61	0.59	0.4
CD33	2.9	2.03	2.27	1.73	2.47	1.8	0.78	0.85	0.85	0.89
CD35	3.03	2.4	2.03	1.83	2.07	1.43	0.67	0.76	0.68	0.6
CD37	3.2	2.67	3.67	2.4	2.1	1.43	1.15	0.9	0.66	0.54
CD39	2.7	2.13	2.77	1.87	2.33	1.27	1.02	0.88	0.86	0.59
CD41	3.63	3.07	3.67	2.6	2.27	1.8	1.01	0.85	0.62	0.59
CD43	3.43	3.07	3.87	2.97	1.93	1.4	1.13	0.97	0.56	0.46
CD45	3.43	2.87	2.9	1.93	2.43	1.77	0.84	0.67	0.71	0.62
CD47	2.93	2.33	2.9	2.03	1.93	1.33	0.99	0.87	0.66	0.57
CD49	3.27	3.07	3.53	2.33	2.03	1.57	1.08	0.76	0.62	0.51
CD51	3.53	3.07	2.2	2.03	1.97	0.97	0.62	0.66	0.56	0.32
CD53	3.43	3	2.43	1.67	2.27	1.53	0.71	0.56	0.66	0.51
CD55	3.37	3.07	3	1.8	2.37	1.73	0.89	0.59	0.7	0.57
CD57	2.73	2.03	2.13	2	1.97	1.37	0.78	0.98	0.72	0.67
CD59	3.2	2.5	2.83	1.73	2.23	1.43	0.89	0.69	0.7	0.57
CD61	3.23	2.6	2.67	1.73	2.1	1.23	0.82	0.67	0.65	0.47
CD63	3.2	2.83	3.4	2.77	1.93	1.6	1.06	0.98	0.6	0.56
CD67	3.1	3	3.4	2.53	2.2	1.07	1.1	0.84	0.71	0.36
CD69	2.23	1.73	2.23	1.6	1.57	1.23	1	0.92	0.7	0.71
CD71	3	2.5	3.47	2.57	1.97	1.23	1.16	1.03	0.66	0.49
CD73	2.77	2.4	2.1	1.97	1.87	1.3	0.76	0.82	0.67	0.54
CD77	3.07	2.33	2.8	2.3	2.2	1.47	0.91	0.99	0.72	0.63
CD79	3.03	2.4	3.33	2.73	2.57	1.33	1.1	1.14	0.85	0.56
CD81	3.03	2.33	3.63	2.93	1.93	1.33	1.2	1.26	0.64	0.57

Appendix A-3c (Continued):

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	3.13	2.57	3.73	2.53	1.93	1.6	1.19	0.99	0.62	0.62
CD85	3.07	2.43	3.33	2.5	1.93	1.2	1.09	1.03	0.63	0.49
CE11	2.17	1.77	2.8	2.37	1.93	1.07	1.29	1.34	0.89	0.6
CE21	2.6	2.33	2.7	1.83	2.43	1.43	1.04	0.79	0.94	0.61
CE31	2.83	2.6	2.27	1.57	2.03	1.2	0.8	0.6	0.72	0.46
CE41	3	2.57	3.3	2.9	2.23	1.6	1.1	1.13	0.74	0.62
CE51	2.97	2.9	2.83	2.47	2.53	1.7	0.95	0.85	0.85	0.59
CE61	3.13	2.9	3.5	2.83	2.1	1.73	1.12	0.98	0.67	0.6
CE71	2.97	2.73	3.23	2.87	2.67	2.1	1.09	1.05	0.9	0.77
DB15	1.93	1.57	2.93	2	2	1.2	1.52	1.28	1.03	0.77
DB17	2.03	1.4	2.73	1.9	1.97	1.47	1.34	1.36	0.97	1.05
DB19	2.37	1.7	2.8	2.03	2	1.43	1.18	1.2	0.84	0.84
DB25	2.43	2	3.5	3	2.63	1.5	1.44	1.5	1.08	0.75
DB27	2.37	1.8	3.23	2.57	2.7	1.97	1.37	1.43	1.14	1.09
DB29	2.6	2.17	2.63	2.43	2.5	1.83	1.01	1.12	0.96	0.85
DC11	2.5	2.07	3.43	3.03	2.47	2.13	1.37	1.47	0.99	1.03
DC13	2.7	1.93	3.43	2.47	2.5	1.9	1.27	1.28	0.93	0.98
DC21	2.73	2.23	3.33	2.57	2.47	2.2	1.22	1.15	0.9	0.99
DC23	2.5	2.03	3.47	2.8	2.47	1.97	1.39	1.38	0.99	0.97
DC31	2.43	1.7	3.23	2.27	2.37	1.8	1.33	1.33	0.97	1.06
DC33	2.67	2.13	3.07	2.57	2.63	1.93	1.15	1.2	0.99	0.91
DC71	1.73	1.47	2	1.97	2.5	1.67	1.15	1.34	1.44	1.14
DC73	1.6	1.43	1.97	1.77	1.53	1.1	1.23	1.23	0.96	0.77
DC75	2.5	1.9	3.03	2.3	2.23	2.07	1.21	1.21	0.89	1.09

Appendix A-3d: Annual wheat yield (t/ha) from canola-wheat-fallow averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{lp}, SN_l).

Weather grid	BL		SN_l		SN_{lp}		SN_l/BL		SN_{lp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	2.73	2.7	4.6	4.57	4.73	4.73	1.68	1.69	1.73	1.75
BC59	2.17	2.13	5.07	4.8	5.1	5.07	2.34	2.25	2.35	2.38
BC69	1.83	1.8	4.8	4.73	5.23	5.23	2.62	2.63	2.85	2.91
BC79	1.73	1.67	4.57	4.7	4.73	4.73	2.64	2.82	2.73	2.84
BC89	3.07	3.2	5.2	5.3	5.03	4.9	1.7	1.66	1.64	1.53
BC99	2.97	3.03	4.6	4.87	5.23	5.1	1.55	1.6	1.76	1.68
BD31	3.2	2.83	5.27	5.13	5.3	4.93	1.65	1.81	1.66	1.74
BD33	3.53	3.4	5.17	4.97	5.23	5	1.46	1.46	1.48	1.47
BD35	2.7	2.57	4.5	4.43	4.57	4.6	1.67	1.73	1.69	1.79
BD37	2.67	2.63	3.83	3.57	4.33	4.33	1.44	1.35	1.62	1.65
BD39	2.87	2.83	3.87	3.7	4.37	4.2	1.35	1.31	1.52	1.48
BD41	3.57	3.47	5.37	5.13	4.93	5.23	1.5	1.48	1.38	1.51
BD43	2.97	2.93	3.9	3.83	4.3	4.23	1.31	1.31	1.45	1.44
BD45	2.07	1.87	3.27	3.03	3.97	3.9	1.58	1.62	1.92	2.09
BD47	2.43	2.27	3.33	3	4.03	3.87	1.37	1.32	1.66	1.71
BD49	2.5	2.3	3.53	3.27	3.97	3.97	1.41	1.42	1.59	1.72
BD51	3.2	3.1	5.37	5.33	5.47	5.43	1.68	1.72	1.71	1.75
BD53	2.43	2.3	3.53	3.5	3.9	3.77	1.45	1.52	1.6	1.64
BD55	2.77	2.4	3.5	3.1	3.87	4.03	1.26	1.29	1.4	1.68
BD57	2.33	2.17	2.97	2.7	3.57	3.43	1.27	1.25	1.53	1.58
BD59	2.33	2.17	3.33	3	3.77	3.77	1.43	1.38	1.61	1.74
BD61	3.67	3.57	5.43	5.5	5.57	5.5	1.48	1.54	1.52	1.54
BD63	2.83	2.67	3.77	3.73	4.1	4.13	1.33	1.4	1.45	1.55
BD65	2.63	2.47	3.47	3.3	4.37	4.3	1.32	1.34	1.66	1.74
BD67	2.5	2.37	3.5	3.27	4.2	4.17	1.4	1.38	1.68	1.76
BD69	2.13	2.07	2.73	2.67	3.93	3.9	1.28	1.29	1.84	1.89
BD71	4.1	3.97	5.27	5.2	5.23	5.17	1.28	1.31	1.28	1.3
BD73	3.43	3.43	4.33	4.2	4.6	4.57	1.26	1.22	1.34	1.33
BD75	3.2	3.1	3.97	3.83	4.3	4.33	1.24	1.24	1.34	1.4
BD77	1.5	1.5	2.33	2.2	2.77	2.5	1.56	1.47	1.84	1.67
BD79	2.17	2.07	3	2.9	4.2	4.23	1.38	1.4	1.94	2.05
BD81	4.37	4.33	5.2	5.13	5.17	5.13	1.19	1.18	1.18	1.18
BD83	3.73	3.73	4.23	4.33	4.03	4.2	1.13	1.16	1.08	1.13
BD85	3.37	3.27	4	3.97	4.3	4.17	1.19	1.21	1.28	1.28
BD87	2.43	2.23	3.3	3.1	4.13	4.03	1.36	1.39	1.7	1.81
BD89	2.2	2.13	3.17	2.97	4.07	4.1	1.44	1.39	1.85	1.92
BD91	4.27	4.2	4.9	4.87	4.83	4.6	1.15	1.16	1.13	1.1
BD93	3.83	3.83	4.3	4.33	4.47	4.47	1.12	1.13	1.17	1.17
BD95	3.73	3.53	4.3	4.2	4.4	4.53	1.15	1.19	1.18	1.28
BD97	3.4	3.3	4.27	4.13	4.47	4.57	1.25	1.25	1.31	1.38
BD99	2.97	2.93	3.63	3.57	4.1	3.93	1.22	1.22	1.38	1.34
BE31	2.43	2.37	3.57	3.47	4.13	4.07	1.47	1.46	1.7	1.72
BE41	2.9	3.07	4.2	4.07	4.6	4.5	1.45	1.33	1.59	1.47
BE51	2.37	2.37	3.27	3.23	4	4	1.38	1.37	1.69	1.69
BE61	1.73	1.67	2.4	2.27	3.83	3.8	1.38	1.36	2.21	2.28
BE71	1.67	1.6	2.47	2.47	3.73	3.73	1.48	1.54	2.24	2.33
BE81	2.4	2.23	3.4	3.23	4.23	4.13	1.42	1.45	1.76	1.85
BE91	2.23	2.13	3.13	2.93	3.67	3.53	1.4	1.38	1.64	1.66
CB77	3.3	3.23	4.87	4.77	5.17	4.97	1.47	1.47	1.57	1.54
CB79	3.53	3.4	4.43	4.4	4.9	4.57	1.25	1.29	1.39	1.34
CB87	3.53	3.67	4.87	4.63	4.83	4.5	1.38	1.26	1.37	1.23
CB89	3.97	3.77	4.6	4.63	4.8	4.53	1.16	1.23	1.21	1.2
CB97	3.67	3.73	4.5	4.4	4.57	4.33	1.23	1.18	1.25	1.16
CB99	3.9	3.87	4.57	4.5	4.57	4.3	1.17	1.16	1.17	1.11
CC17	2.07	2.1	4.73	4.63	5.27	5.03	2.29	2.21	2.55	2.4

Appendix A-3d (Continued):

Weather grid	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	3.7	3.77	4.73	4.6	5.17	4.9	1.28	1.22	1.4	1.3
CC25	1.7	1.7	4.67	4.6	4.83	4.93	2.75	2.71	2.84	2.9
CC27	3.5	3.23	5.23	5.1	5.43	5.17	1.5	1.58	1.55	1.6
CC29	3.93	4.1	4.93	4.9	4.73	4.7	1.25	1.2	1.2	1.15
CC35	3.3	3.33	5.13	4.93	5.37	5	1.56	1.48	1.63	1.5
CC37	3.43	3.57	4.6	4.4	5.13	4.93	1.34	1.23	1.5	1.38
CC39	4.03	4	5.07	5.1	5	4.93	1.26	1.27	1.24	1.23
CC43	3.27	3.27	4.83	4.57	5.13	4.9	1.48	1.4	1.57	1.5
CC45	3.6	3.53	4.87	4.63	4.7	4.63	1.35	1.31	1.31	1.31
CC47	3.8	3.67	5.07	4.9	4.7	4.77	1.33	1.34	1.24	1.3
CC49	4.47	4.47	5.13	4.67	4.93	4.77	1.15	1.04	1.1	1.07
CC53	3.17	3.1	5.17	4.83	4.9	4.93	1.63	1.56	1.55	1.59
CC55	3.4	3.5	5	5.17	4.67	4.47	1.47	1.48	1.37	1.28
CC57	3.73	3.67	4.83	4.57	4.67	4.67	1.29	1.25	1.25	1.27
CC59	4.53	4.33	5.07	4.77	4.77	4.8	1.12	1.1	1.05	1.11
CC65	3.13	3.1	4.37	4.33	4.8	4.67	1.39	1.4	1.53	1.51
CC67	3.93	4.03	4.93	4.83	4.9	4.73	1.25	1.2	1.25	1.17
CC69	4.27	3.93	4.7	4.7	4.6	4.27	1.1	1.2	1.08	1.08
CC77	3.1	3.07	5	4.6	4.43	4.17	1.61	1.5	1.43	1.36
CC79	3.83	3.7	4.9	4.8	4.8	4.93	1.28	1.3	1.25	1.33
CC87	3.13	3.2	4.6	4.67	5.4	4.97	1.47	1.46	1.72	1.55
CC89	3.77	3.67	4.6	4.57	4.5	4.47	1.22	1.25	1.19	1.22
CC97	4.13	3.87	4.73	4.67	4.63	4.8	1.15	1.21	1.12	1.24
CD11	4.23	4.1	4.87	4.93	4.97	4.8	1.15	1.2	1.17	1.17
CD13	3.97	3.93	4.7	4.67	4.83	4.47	1.18	1.19	1.22	1.14
CD15	3.7	3.6	4.5	4.4	4.47	4.2	1.22	1.22	1.21	1.17
CD17	3.77	3.57	4.3	4.3	4.47	4.43	1.14	1.21	1.19	1.24
CD19	3.57	3.47	4.43	4.3	4.47	4.6	1.24	1.24	1.25	1.33
CD21	4.27	4.27	4.9	4.57	4.77	4.63	1.15	1.07	1.12	1.09
CD23	4.2	4.2	4.53	4.47	4.67	4.6	1.08	1.06	1.11	1.1
CD25	3.87	3.87	4.47	4.43	4.37	4.33	1.16	1.15	1.13	1.12
CD27	3.93	3.9	4.47	4.43	4.53	4.4	1.14	1.14	1.15	1.13
CD29	3.7	3.57	4.03	3.87	4.2	4.07	1.09	1.08	1.14	1.14
CD31	4.43	4.3	4.53	4.43	4.6	4.3	1.02	1.03	1.04	1
CD33	4.33	4.23	4.8	4.67	4.8	4.67	1.11	1.1	1.11	1.1
CD35	3.9	3.8	4.43	4.37	4.73	4.5	1.14	1.15	1.21	1.18
CD37	4.13	3.93	4.5	4.4	4.4	4.4	1.09	1.12	1.06	1.12
CD39	4.03	3.97	4.37	4.47	4.5	4.47	1.08	1.13	1.12	1.13
CD41	4.57	4.57	5	4.77	5	4.87	1.09	1.04	1.09	1.07
CD43	4.33	4.23	4.7	4.6	4.2	4.3	1.08	1.09	0.97	1.02
CD45	4.3	4.23	4.67	4.57	4.73	4.47	1.09	1.08	1.1	1.06
CD47	3.97	3.77	4.4	4.33	4.3	4.23	1.11	1.15	1.08	1.12
CD49	4.23	4.23	4.6	4.5	4.57	4.53	1.09	1.06	1.08	1.07
CD51	4.5	4.27	4.5	4.57	4.67	4.37	1	1.07	1.04	1.02
CD53	4.3	4.23	4.47	4.43	4.43	4.33	1.04	1.05	1.03	1.02
CD55	4.4	4.4	4.63	4.57	4.7	4.53	1.05	1.04	1.07	1.03
CD57	3.77	3.53	4.1	4.03	4.33	4.2	1.09	1.14	1.15	1.19
CD59	4.13	3.93	4.6	4.53	4.3	4.3	1.11	1.15	1.04	1.09
CD61	4.37	4.13	4.8	4.63	4.67	4.77	1.1	1.12	1.07	1.15
CD63	4.37	4.33	4.73	4.3	4.4	4.47	1.08	0.99	1.01	1.03
CD67	4.2	4.2	4.77	4.67	4.33	4.17	1.13	1.11	1.03	0.99
CD69	3.47	3.4	3.57	3.3	3.63	3.83	1.03	0.97	1.05	1.13
CD71	4.17	4.1	4.9	4.97	4.8	4.77	1.18	1.21	1.15	1.16
CD73	4	4	4.33	4.27	4.6	4.53	1.08	1.07	1.15	1.13
CD77	4.23	3.87	4.83	4.5	4.43	4.33	1.14	1.16	1.05	1.12
CD79	4.13	3.97	4.63	4.5	4.57	4.1	1.12	1.13	1.11	1.03
CD81	4.2	4.07	4.93	4.97	4.67	4.63	1.17	1.22	1.11	1.14

Appendix A-3d (Continued):

Weather grid	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	4.2	4.07	4.93	4.87	4.6	4.47	1.17	1.2	1.1	1.1
CD85	4.23	4.1	4.77	4.73	4.67	4.5	1.13	1.15	1.1	1.1
CE11	2.9	2.8	3.73	3.7	3.93	3.8	1.29	1.32	1.36	1.36
CE21	3.73	3.6	4.3	4.1	4.2	4.23	1.15	1.14	1.13	1.18
CE31	3.77	3.7	4.17	4.2	4.2	4.13	1.11	1.14	1.11	1.12
CE41	3.93	3.8	4.33	4.33	4.27	4.23	1.1	1.14	1.08	1.11
CE51	3.83	3.83	4.2	4.07	4.17	4.03	1.1	1.06	1.09	1.05
CE61	4.1	4.07	4.5	4.37	4.13	3.97	1.1	1.07	1.01	0.98
CE71	3.93	3.9	4.47	4.37	4.43	4.47	1.14	1.12	1.13	1.15
DB15	3.6	3.6	4.73	4.37	4.37	4.23	1.31	1.21	1.21	1.18
DB17	3.8	3.43	4.6	4.5	4.37	4.5	1.21	1.31	1.15	1.31
DB19	3.97	3.93	4.47	4.37	4.47	4.23	1.13	1.11	1.13	1.08
DB25	3.73	3.7	4.77	4.63	4.4	4.23	1.28	1.25	1.18	1.14
DB27	3.87	3.53	4.67	4.57	4.57	4.53	1.21	1.29	1.18	1.28
DB29	3.97	3.8	4.53	4.53	4.5	4.63	1.14	1.19	1.13	1.22
DC11	3.73	3.6	4.43	4.3	4	4.13	1.19	1.19	1.07	1.15
DC13	3.83	3.7	4.5	4.4	4.27	4.3	1.17	1.19	1.11	1.16
DC21	3.8	3.53	4.47	4.47	4.43	4.37	1.18	1.26	1.17	1.24
DC23	3.77	3.6	4.57	4.47	4.23	4.27	1.21	1.24	1.12	1.19
DC31	3.73	3.6	4.5	4.37	4.2	4.3	1.21	1.21	1.13	1.19
DC33	3.93	3.77	4.53	4.5	4.47	4.37	1.15	1.19	1.14	1.16
DC71	3.13	3.2	3.87	4.17	4.1	4.03	1.23	1.3	1.31	1.26
DC73	2.5	2.63	3.3	3.33	3.27	3.03	1.32	1.27	1.31	1.15
DC75	3.23	3.1	3.97	3.67	3.83	3.87	1.23	1.18	1.19	1.25

Appendix A-3e: Annual winter wheat yield (t/ha) from winter wheat-fallow averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{lp}, SN_l).

Weather grid	BL		SN_l		SN_{lp}		SN_l/BL		SN_{lp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	2.4	2.1	2.3	2.2	3.9	2.1	0.96	1.05	1.63	1
BC59	2	2.1	2.2	2.1	3.9	2.5	1.1	1	1.95	1.19
BC69	1.9	1.9	3	2	3.8	2	1.58	1.05	2	1.05
BC79	1.6	1.7	2.1	1.9	2.2	2	1.31	1.12	1.38	1.18
BC89	2.1	2.6	2.5	2.2	2.5	2.3	1.19	0.85	1.19	0.88
BC99	1.6	1.6	4.5	1.7	4.6	3.2	2.81	1.06	2.88	2
BD31	3.1	1.9	2.5	1.9	3.2	1.9	0.81	1	1.03	1
BD33	2.2	2.1	3.1	2.2	2.7	2.1	1.41	1.05	1.23	1
BD35	2.2	1.7	2.9	1.9	2.7	2	1.32	1.12	1.23	1.16
BD37	3.5	1.7	3	2	3	2.1	0.86	1.18	0.86	1.24
BD39	2.8	1.8	3	2	2.9	2.1	1.07	1.11	1.04	1.17
BD41	2.1	2.1	2.4	2	3.2	2	1.14	0.95	1.52	0.95
BD43	2.7	1.7	3.1	2	3	1.9	1.15	1.18	1.11	1.12
BD45	2.5	1.6	2.7	1.8	2.8	1.9	1.08	1.13	1.12	1.19
BD47	3.4	1.6	2.9	2	2.6	2	0.85	1.25	0.76	1.25
BD49	3.1	1.8	2.9	1.9	3	2.1	0.94	1.06	0.97	1.17
BD51	2.2	2.2	2.4	2	2.3	2.1	1.09	0.91	1.05	0.95
BD53	2.9	1.6	2.8	1.8	2.6	1.9	0.97	1.13	0.9	1.19
BD55	4.3	1.7	2.8	2	2.8	2.1	0.65	1.18	0.65	1.24
BD57	3.2	2.5	2.3	1.6	3.4	1.7	0.72	0.64	1.06	0.68
BD59	2.9	1.8	2.8	1.9	2.8	2.1	0.97	1.06	0.97	1.17
BD61	2.2	2.2	2.5	2.1	2.4	2.1	1.14	0.95	1.09	0.95
BD63	3.2	1.7	2.5	1.8	2.7	1.9	0.78	1.06	0.84	1.12
BD65	2	1.9	2.8	2	2.6	2.1	1.4	1.05	1.3	1.11
BD67	2.9	1.8	2.4	1.8	2.5	1.9	0.83	1	0.86	1.06
BD69	2.9	1.7	2.8	1.9	2.6	2.1	0.97	1.12	0.9	1.24
BD71	4.4	3.7	3.3	2.5	2.9	2.5	0.75	0.68	0.66	0.68
BD73	2.8	2.8	2.3	1.9	3	1.9	0.82	0.68	1.07	0.68
BD75	3.8	2	2.4	1.9	2.4	2.1	0.63	0.95	0.63	1.05
BD77	1.3	1.2	1.8	1.5	2.5	1.6	1.38	1.25	1.92	1.33
BD79	1.7	1.8	2.4	2	2.5	2.2	1.41	1.11	1.47	1.22
BD81	4.1	3.8	3	2.6	2.8	2.5	0.73	0.68	0.68	0.66
BD83	3.4	2	2.4	2.1	2.5	2.2	0.71	1.05	0.74	1.1
BD85	2.6	2.4	2.8	2.3	2.7	2.4	1.08	0.96	1.04	1
BD87	1.8	1.8	5.2	1.8	4.5	1.9	2.89	1	2.5	1.06
BD89	1.8	1.8	5.4	1.8	4.6	2.1	3	1	2.56	1.17
BD91	2.3	2.4	2.5	2.2	2.4	2.2	1.09	0.92	1.04	0.92
BD93	2.7	2.7	2.9	2.6	2.8	2.6	1.07	0.96	1.04	0.96
BD95	2.4	2.5	2.7	2.4	2.7	2.4	1.13	0.96	1.13	0.96
BD97	2.2	2.2	2.3	2.1	2.3	2.1	1.05	0.95	1.05	0.95
BD99	1.9	2	5.3	1.9	4.2	3.4	2.79	0.95	2.21	1.7
BE31	2	2	2.8	2.1	2.7	2.3	1.4	1.05	1.35	1.15
BE41	1.9	2	2.5	2	2.5	2.1	1.32	1	1.32	1.05
BE51	3.1	1.8	2.9	2	2.9	2.1	0.94	1.11	0.94	1.17
BE61	1.6	1.6	2.4	1.9	2.8	2.2	1.5	1.19	1.75	1.38
BE71	1.7	1.7	2.6	2	2.5	2.1	1.53	1.18	1.47	1.24
BE81	2	2	2.4	2.1	2.4	2.1	1.2	1.05	1.2	1.05
BE91	1.6	1.6	4.7	1.7	2	1.8	2.94	1.06	1.25	1.13
CB77	1.8	1.8	4.4	2.6	5	2.3	2.44	1.44	2.78	1.28
CB79	1.8	1.9	2.8	3	2.6	1.7	1.56	1.58	1.44	0.89
CB87	2.5	2.6	2.7	2.5	2.6	2.5	1.08	0.96	1.04	0.96
CB89	2.6	2.6	2.7	2.6	2.6	2.5	1.04	1	1	0.96
CB97	2.5	2.5	2.7	2.5	2.6	2.5	1.08	1	1.04	1
CB99	2.5	2.5	2.7	2.6	3.1	3.1	1.08	1.04	1.24	1.24
CC17	1.7	1.7	3.9	2.8	3.7	2.7	2.29	1.65	2.18	1.59

Appendix A-3e (Continued):

Weather grid	BL		SN_t		SN_w		SN/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	3	1.7	3.7	2.2	3.5	1.7	1.23	1.29	1.17	1
CC25	1.4	1.5	4.1	4	4.1	3.5	2.93	2.67	2.93	2.33
CC27	1.6	1.7	4.1	3.4	3.4	4.4	2.56	2	2.13	2.59
CC29	3.8	2.8	2.1	1.8	2	1.9	0.55	0.64	0.53	0.68
CC35	2.8	1.9	3.8	2.3	4.7	4.7	1.36	1.21	1.68	2.47
CC37	1.9	1.9	4.5	2.4	3.2	2.4	2.37	1.26	1.68	1.26
CC39	2.5	1.9	2.1	1.8	2	1.9	0.84	0.95	0.8	1
CC43	1.9	2.3	4.2	1.8	4.5	1.8	2.21	0.78	2.37	0.78
CC45	1.9	2.4	4.8	2.2	3.7	3.5	2.53	0.92	1.95	1.46
CC47	2.1	2	4.4	1.8	3.7	3.4	2.1	0.9	1.76	1.7
CC49	2	2	2	1.8	1.9	1.8	1	0.9	0.95	0.9
CC53	1.8	2.3	3.2	1.7	3.8	2.8	1.78	0.74	2.11	1.22
CC55	3.2	2.1	4.6	2.8	4.5	3.6	1.44	1.33	1.41	1.71
CC57	2.2	2.2	4.3	3.2	4	3.7	1.95	1.45	1.82	1.68
CC59	2	2	2.7	1.8	4.5	1.8	1.35	0.9	2.25	0.9
CC65	2.1	2.1	3.3	2.5	4.6	4.1	1.57	1.19	2.19	1.95
CC67	2.1	2	3.2	3.3	4.2	3.2	1.52	1.65	2	1.6
CC69	2	2	4.1	1.8	4.1	2.6	2.05	0.9	2.05	1.3
CC77	3.4	2.3	4	2.9	4	3.5	1.18	1.26	1.18	1.52
CC79	2.2	2.2	3.5	2.4	3.4	3.7	1.59	1.09	1.55	1.68
CC87	3.3	2	4.2	3	5.4	3.5	1.27	1.5	1.64	1.75
CC89	2.8	2.1	3.7	2.5	4.4	3.9	1.32	1.19	1.57	1.86
CC97	2	2	1.8	3.3	3.3	2.7	0.9	1.65	1.65	1.35
CD11	2.6	2.6	3	2.2	2.5	2.3	1.15	0.85	0.96	0.88
CD13	2.5	2.5	3	2.4	3.7	2.2	1.2	0.96	1.48	0.88
CD15	2.2	2.2	2.3	2	2.2	2	1.05	0.91	1	0.91
CD17	2.3	2.3	2.3	2.1	2.2	2.1	1	0.91	0.96	0.91
CD19	2.4	2.4	2.5	2.2	2.4	2.2	1.04	0.92	1	0.92
CD21	2.1	2.1	2.6	1.8	4.5	1.9	1.24	0.86	2.14	0.9
CD23	2.6	2.6	2.9	2.2	2.4	2.2	1.12	0.85	0.92	0.85
CD25	2.5	2.5	2.9	2.3	2.4	2.3	1.16	0.92	0.96	0.92
CD27	2.8	2.9	2.9	2.6	2.9	2.7	1.04	0.9	1.04	0.93
CD29	2.1	2.2	2.4	2.1	2.3	2.1	1.14	0.95	1.1	0.95
CD31	2.1	2.1	2.6	1.9	2.5	2.6	1.24	0.9	1.19	1.24
CD33	3.6	3.7	3.3	3.1	3.2	3.1	0.92	0.84	0.89	0.84
CD35	2.4	2.4	2.7	2.2	2.9	2.1	1.13	0.92	1.21	0.88
CD37	2.5	2.5	3.9	2.3	3.2	2.3	1.56	0.92	1.28	0.92
CD39	2.8	2.8	5.6	2.7	4	2.8	2	0.96	1.43	1
CD41	2.6	2.6	2.5	2.2	2.4	2.2	0.96	0.85	0.92	0.85
CD43	2.1	2.1	2	1.8	4	1.8	0.95	0.86	1.9	0.86
CD45	3.6	3.6	3.5	3.3	3.4	3.3	0.97	0.92	0.94	0.92
CD47	2.5	2.5	2.4	2.2	2.3	2.2	0.96	0.88	0.92	0.88
CD49	2.8	2.8	4.9	2.7	3.7	2.8	1.75	0.96	1.32	1
CD51	2	2	2.6	1.8	2.7	1.8	1.3	0.9	1.35	0.9
CD53	2.9	2.9	3.2	2.7	3.4	2.8	1.1	0.93	1.17	0.97
CD55	3.6	3.6	3.4	3.3	3.3	3.2	0.94	0.92	0.92	0.89
CD57	2.9	2.9	3	2.8	2.9	2.9	1.03	0.97	1	1
CD59	2.8	2.9	4.1	2.8	2.9	2.9	1.46	0.97	1.04	1
CD61	2.5	2.5	3.7	2.2	4.3	3	1.48	0.88	1.72	1.2
CD63	2	2	5.5	2.5	4.3	3.1	2.75	1.25	2.15	1.55
CD67	2	2	3.6	3.6	2.8	3.2	1.8	1.8	1.4	1.6
CD69	1.9	1.9	3.3	1.8	3.3	3	1.74	0.95	1.74	1.58
CD71	2	2	3.7	2.3	3.5	3.5	1.85	1.15	1.75	1.75
CD73	1.8	1.8	4.8	1.9	2.6	2.4	2.67	1.06	1.44	1.33
CD77	2	2	4.3	1.8	4.8	3.5	2.15	0.9	2.4	1.75
CD79	2	2	4.2	2.7	3.8	2.6	2.1	1.35	1.9	1.3
CD81	2.3	2	4.9	2.6	3.5	3.6	2.13	1.3	1.52	1.8

Appendix A-3e (Continued):

Weather grid	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	2	2	4.8	3.3	4.3	3.2	2.4	1.65	2.15	1.6
CD85	2	2	3.2	4.4	3.5	2.6	1.6	2.2	1.75	1.3
CE11	1.9	2	2.6	1.9	2.2	2	1.37	0.95	1.16	1
CE21	2	2	2.9	1.8	4.2	1.8	1.45	0.9	2.1	0.9
CE31	2.7	2.7	3.7	2.6	2.9	2.7	1.37	0.96	1.07	1
CE41	2.8	2.8	3.6	2.7	2.9	2.8	1.29	0.96	1.04	1
CE51	2.1	2.1	4.6	1.9	4.9	3.3	2.19	0.9	2.33	1.57
CE61	2.1	2.1	6.2	3.7	3.9	2.9	2.95	1.76	1.86	1.38
CE71	2.1	2.1	4.9	3.2	4	2.6	2.33	1.52	1.9	1.24
DB15	2	2	3	2.7	3.3	1.8	1.5	1.35	1.65	0.9
DB17	2	2	3.6	2.7	2.9	2.9	1.8	1.35	1.45	1.45
DB19	2.6	2.7	3.2	2.6	2.7	2.6	1.23	0.96	1.04	0.96
DB25	2.6	2.4	2.3	2.3	2.3	2.3	0.88	0.96	0.88	0.96
DB27	2.3	2.3	2.5	2.5	2.4	2.4	1.09	1.09	1.04	1.04
DB29	2.3	2.3	3.7	2.9	2.9	2.8	1.61	1.26	1.26	1.22
DC11	1.9	1.9	4.2	2.6	2.5	2.4	2.21	1.37	1.32	1.26
DC13	2.4	2.4	3.4	3	2.9	3.5	1.42	1.25	1.21	1.46
DC21	2.4	2.4	2.3	2.8	2.8	2.2	0.96	1.17	1.17	0.92
DC23	2.8	2.9	3.1	3.1	3.7	3.7	1.11	1.07	1.32	1.28
DC31	2.5	2.5	2.6	2.7	3	2.7	1.04	1.08	1.2	1.08
DC33	2.9	2.9	3	3.1	3	3.6	1.03	1.07	1.03	1.24
DC71	2.4	1.9	2	2	1.9	1.9	0.83	1.05	0.79	1
DC73	1.7	1.7	2.4	2.4	2.8	1.8	1.41	1.41	1.65	1.06
DC75	1.8	1.8	1.9	1.9	1.8	1.9	1.06	1.06	1	1.06

Appendix A-4a: Annual residue (t/ha) from continuous wheat averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	3.41	2.19	3.2	1.9	3.29	2.03	0.94	0.87	0.97	0.92
BC59	3.96	2.67	3.11	1.92	3.29	2.08	0.79	0.72	0.83	0.78
BC69	4.39	2.98	3.21	1.97	3.12	1.95	0.73	0.66	0.71	0.65
BC79	4.26	2.92	3.09	1.92	3.36	2.18	0.72	0.66	0.79	0.75
BC89	3.49	2.33	3.23	1.98	3.55	2.27	0.93	0.85	1.02	0.97
BC99	3.18	2.14	2.76	1.7	3.03	1.96	0.87	0.79	0.95	0.92
BD31	3.31	2.09	3.31	1.92	3.35	2.05	1	0.92	1.01	0.98
BD33	3.28	2.08	3.6	2.09	3.72	2.28	1.1	1	1.13	1.09
BD35	3.21	2.02	3.29	1.89	3.48	2.12	1.02	0.93	1.08	1.05
BD37	3.04	1.9	3.32	1.94	3.52	2.16	1.09	1.02	1.16	1.13
BD39	3.22	2.02	3.48	2.06	3.64	2.24	1.08	1.02	1.13	1.11
BD41	3.19	2.09	3.34	1.96	3.52	2.15	1.05	0.94	1.1	1.03
BD43	2.88	1.82	3.05	1.78	3.28	2.02	1.06	0.98	1.14	1.11
BD45	2.99	1.88	3.14	1.83	3.35	2.06	1.05	0.97	1.12	1.1
BD47	3.13	1.96	3.31	1.96	3.52	2.16	1.06	1	1.12	1.1
BD49	3.22	2.04	3.48	2.06	3.73	2.3	1.08	1.01	1.16	1.13
BD51	3.24	2.11	3.37	2.01	3.5	2.18	1.04	0.95	1.08	1.03
BD53	3.02	1.93	3.07	1.8	3.28	2.03	1.02	0.93	1.09	1.05
BD55	3.15	2	3.3	1.97	3.55	2.19	1.05	0.98	1.13	1.09
BD57	2.79	1.76	2.78	1.63	2.88	1.8	0.99	0.93	1.03	1.03
BD59	3.29	2.09	3.54	2.11	3.75	2.31	1.08	1.01	1.14	1.11
BD61	3.43	2.24	3.58	2.16	3.84	2.39	1.04	0.97	1.12	1.07
BD63	2.98	1.92	3.1	1.84	3.3	2.06	1.04	0.96	1.11	1.07
BD65	3.41	2.18	3.58	2.14	3.81	2.36	1.05	0.98	1.12	1.09
BD67	3.24	2.07	3.35	2	3.54	2.21	1.03	0.97	1.09	1.06
BD69	3.27	2.09	3.36	2.02	3.57	2.21	1.03	0.97	1.09	1.06
BD71	3.55	2.32	3.99	2.42	4.26	2.68	1.13	1.04	1.2	1.15
BD73	2.97	1.93	3.15	1.91	3.33	2.1	1.06	0.99	1.12	1.09
BD75	3.14	2.04	3.29	2	3.56	2.24	1.05	0.98	1.13	1.09
BD77	3.39	2.17	3.12	1.87	3.33	2.1	0.92	0.86	0.98	0.97
BD79	3.48	2.24	3.5	2.14	3.64	2.31	1.01	0.96	1.05	1.03
BD81	3.65	2.39	4.07	2.48	4.33	2.73	1.11	1.04	1.19	1.14
BD83	3.01	1.96	3.21	1.94	3.49	2.19	1.06	0.99	1.16	1.12
BD85	3.62	2.34	3.91	2.39	4.03	2.52	1.08	1.02	1.11	1.08
BD87	3.19	2.06	3.17	1.98	3.34	2.13	0.99	0.96	1.05	1.03
BD89	3.23	2.1	3.25	2.02	3.33	2.13	1.01	0.96	1.03	1.01
BD91	3.26	2.15	3.55	2.19	3.81	2.44	1.09	1.02	1.17	1.13
BD93	3.92	2.58	4.3	2.65	4.47	2.83	1.1	1.03	1.14	1.1
BD95	3.49	2.26	3.82	2.31	4	2.51	1.1	1.02	1.15	1.11
BD97	3.3	2.18	3.44	2.14	3.65	2.32	1.04	0.98	1.11	1.07
BD99	3.03	1.99	3.12	1.98	3.35	2.17	1.03	0.99	1.1	1.09
BE31	3.49	2.25	3.67	2.19	3.81	2.37	1.05	0.98	1.09	1.06
BE41	3.1	1.98	3.13	1.88	3.37	2.11	1.01	0.95	1.09	1.06
BE51	3.21	2.04	3.49	2.07	3.63	2.26	1.09	1.01	1.13	1.11
BE61	3.26	2.08	3.49	2.06	3.69	2.31	1.07	0.99	1.13	1.11
BE71	3.47	2.25	3.67	2.22	3.65	2.28	1.06	0.99	1.05	1.02
BE81	3.27	2.11	3.36	2.08	3.52	2.23	1.03	0.98	1.08	1.06
BE91	2.96	1.92	2.96	1.82	3.24	2.09	1	0.95	1.1	1.09
CB77	3.01	2.02	2.83	1.78	3.06	2.01	0.94	0.88	1.02	1
CB79	2.9	1.93	2.88	1.83	3.09	2.03	0.99	0.95	1.07	1.05
CB87	3.56	2.33	4.03	2.54	4.16	2.69	1.13	1.09	1.17	1.16
CB89	3.54	2.33	4.12	2.6	4.25	2.76	1.16	1.12	1.2	1.18
CB97	3.49	2.29	3.93	2.48	4.14	2.69	1.13	1.08	1.19	1.17
CB99	3.49	2.3	4.11	2.59	4.32	2.8	1.18	1.12	1.24	1.22
CC17	4.02	2.75	2.87	1.81	3.21	2.12	0.71	0.66	0.8	0.77

Appendix A-4a (Continued):

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	2.87	1.89	2.8	1.74	3.09	2.01	0.97	0.92	1.08	1.06
CC25	4.26	2.93	2.81	1.76	3.16	2.1	0.66	0.6	0.74	0.72
CC27	3.13	2.12	2.74	1.71	2.98	1.97	0.87	0.81	0.95	0.93
CC29	2.89	1.93	2.94	1.83	3.26	2.12	1.02	0.95	1.13	1.1
CC35	3.06	2.04	2.76	1.75	3.07	2.04	0.9	0.86	1	1
CC37	2.78	1.84	2.84	1.8	3.13	2.07	1.02	0.98	1.13	1.13
CC39	2.87	1.88	2.96	1.81	3.23	2.1	1.03	0.96	1.13	1.11
CC43	3.1	2.07	2.87	1.8	3.17	2.06	0.93	0.87	1.02	1
CC45	2.97	1.98	2.94	1.85	3.24	2.13	0.99	0.94	1.09	1.08
CC47	2.93	1.95	3	1.88	3.3	2.15	1.02	0.97	1.13	1.1
CC49	2.8	1.85	2.88	1.78	3.15	2.05	1.03	0.96	1.12	1.11
CC53	3.15	2.12	2.86	1.8	3.19	2.1	0.91	0.85	1.01	0.99
CC55	2.99	1.99	2.94	1.87	3.26	2.15	0.98	0.94	1.09	1.08
CC57	2.93	1.94	3	1.9	3.32	2.19	1.02	0.98	1.14	1.13
CC59	2.85	1.9	2.96	1.85	3.23	2.12	1.04	0.97	1.14	1.12
CC65	3.01	2.03	2.96	1.88	3.25	2.15	0.98	0.93	1.08	1.06
CC67	2.94	1.97	2.99	1.9	3.3	2.17	1.02	0.97	1.12	1.1
CC69	2.88	1.92	2.99	1.89	3.28	2.15	1.04	0.98	1.14	1.12
CC77	3.17	2.11	2.93	1.87	3.24	2.17	0.92	0.89	1.02	1.03
CC79	2.98	1.98	3	1.9	3.33	2.19	1.01	0.96	1.12	1.11
CC87	3.06	2.06	2.74	1.74	3.01	2	0.89	0.85	0.98	0.97
CC89	3	2.02	2.99	1.92	3.36	2.23	1	0.95	1.12	1.1
CC97	2.76	1.83	2.77	1.77	3.06	2	1	0.97	1.11	1.09
CD11	3.38	2.19	3.82	2.36	4.06	2.61	1.13	1.08	1.2	1.19
CD13	3.38	2.21	3.76	2.3	3.99	2.55	1.11	1.04	1.18	1.15
CD15	3.12	2.03	3.37	2.07	3.57	2.29	1.08	1.02	1.15	1.13
CD17	3.18	2.09	3.39	2.09	3.6	2.3	1.07	1	1.13	1.1
CD19	3.39	2.23	3.65	2.26	3.93	2.52	1.08	1.0[illegible]	1.16	1.13
CD21	2.9	1.9	3.01	1.86	3.31	2.12	1.04	0.98	1.14	1.12
CD23	3.41	2.23	3.79	2.33	4.03	2.58	1.11	1.04	1.18	1.16
CD25	3.25	2.11	3.62	2.23	3.84	2.46	1.11	1.06	1.18	1.16
CD27	3.51	2.29	3.99	2.46	4.28	2.71	1.14	1.07	1.22	1.19
CD29	3.31	2.19	3.64	2.28	3.91	2.54	1.1	1.04	1.18	1.16
CD31	2.77	1.8	2.95	1.82	3.28	2.12	1.07	1.01	1.19	1.18
CD33	4.29	2.74	5.07	3.12	5.24	3.31	1.18	1.14	1.22	1.21
CD35	3.4	2.23	3.8	2.36	3.99	2.57	1.12	1.06	1.17	1.15
CD37	3.28	2.16	3.67	2.3	3.91	2.51	1.12	1.06	1.19	1.16
CD39	3.52	2.32	4.02	2.51	4.32	2.77	1.14	1.08	1.23	1.19
CD41	3.54	2.32	3.88	2.4	4.13	2.65	1.1	1.03	1.17	1.14
CD43	2.87	1.87	3.02	1.88	3.3	2.13	1.05	1	1.15	1.14
CD45	4.32	2.79	5.14	3.19	5.31	3.36	1.19	1.14	1.23	1.21
CD47	3.4	2.24	3.79	2.39	4.04	2.62	1.12	1.06	1.19	1.17
CD49	3.62	2.4	4.12	2.59	4.39	2.82	1.14	1.08	1.21	1.18
CD51	2.85	1.88	2.97	1.84	3.27	2.12	1.04	0.98	1.15	1.13
CD53	3.53	2.3	4.06	2.48	4.39	2.78	1.15	1.08	1.24	1.21
CD55	4.22	2.75	5.17	3.25	5.4	3.46	1.22	1.18	1.28	1.26
CD57	3.58	2.38	4.23	2.67	4.51	2.91	1.18	1.12	1.26	1.22
CD59	3.55	2.35	4.12	2.58	4.4	2.83	1.16	1.1	1.24	1.21
CD61	3.31	2.18	3.6	2.27	3.88	2.53	1.09	1.04	1.17	1.16
CD63	2.87	1.91	3.04	1.92	3.33	2.18	1.06	1	1.16	1.14
CD67	2.87	1.91	2.98	1.89	3.29	2.18	1.04	0.99	1.15	1.14
CD69	2.97	1.98	3.18	2.04	3.43	2.28	1.07	1.03	1.16	1.15
CD71	2.87	1.91	2.93	1.87	3.22	2.12	1.02	0.98	1.12	1.11
CD73	2.82	1.89	2.93	1.84	3.22	2.11	1.04	0.97	1.14	1.11
CD77	2.86	1.92	2.92	1.86	3.25	2.14	1.02	0.97	1.14	1.12
CD79	2.9	1.94	3.02	1.92	3.34	2.22	1.04	0.99	1.15	1.14
CD81	2.87	1.93	2.92	1.86	3.22	2.13	1.02	0.96	1.12	1.11
CD83	2.87	1.91	2.94	1.86	3.24	2.14	1.02	0.97	1.13	1.12

Appendix A-4a (Continued):

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD85	2.89	1.94	2.96	1.88	3.24	2.13	1.02	0.97	1.12	1.1
CE11	3.03	2.02	3.11	1.95	3.45	2.22	1.03	0.97	1.14	1.1
CE21	2.84	1.89	2.98	1.85	3.3	2.13	1.05	0.98	1.16	1.13
CE31	3.53	2.36	3.97	2.49	4.25	2.74	1.12	1.06	1.2	1.16
CE41	3.61	2.41	4.06	2.56	4.3	2.79	1.12	1.06	1.19	1.16
CE51	2.92	1.95	3.08	1.95	3.4	2.23	1.06	1	1.16	1.14
CE61	2.93	1.94	3.08	1.95	3.39	2.22	1.05	1.01	1.16	1.14
CE71	2.9	1.93	3.02	1.91	3.34	2.18	1.04	0.99	1.15	1.13
DB15	2.86	1.89	2.85	1.8	3.14	2.05	0.99	0.95	1.1	1.08
DB17	2.83	1.87	2.88	1.82	3.15	2.04	1.02	0.97	1.11	1.09
DB19	3.52	2.32	4.11	2.59	4.32	2.8	1.17	1.11	1.23	1.2
DB25	3.21	2.14	3.31	2.11	3.6	2.38	1.03	0.99	1.12	1.11
DB27	3.26	2.19	3.36	2.16	3.66	2.43	1.03	0.99	1.12	1.11
DB29	3.21	2.15	3.37	2.16	3.68	2.42	1.05	1	1.15	1.13
DC11	2.74	1.82	2.8	1.77	3.08	2.01	1.02	0.97	1.13	1.11
DC13	3.24	2.17	3.44	2.19	3.75	2.46	1.06	1.01	1.16	1.14
DC21	3.24	2.15	3.44	2.19	3.75	2.46	1.06	1.02	1.16	1.14
DC23	3.81	2.56	4.1	2.64	4.4	2.88	1.08	1.03	1.15	1.12
DC31	3.43	2.34	3.69	2.38	3.99	2.65	1.07	1.02	1.16	1.14
DC33	3.83	2.6	4.13	2.68	4.46	2.97	1.08	1.03	1.16	1.14
DC71	3	2.05	2.9	1.92	3.22	2.21	0.97	0.93	1.07	1.08
DC73	3.08	2.09	3.02	2	3.35	2.28	0.98	0.96	1.09	1.09
DC75	2.93	2	2.93	1.93	3.29	2.23	1	0.97	1.12	1.12

Appendix A-4b: Annual wheat residue (t/ha) from wheat-fallow averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	1.3	0.2	1.23	0.13	1.22	0.21	0.94	0.64	0.94	1.04
BC59	1.45	0.28	1.25	0.15	1.26	0.24	0.86	0.55	0.87	0.89
BC69	1.53	0.3	1.27	0.16	1.13	0.15	0.83	0.54	0.74	0.5
BC79	1.51	0.28	1.23	0.16	1.29	0.27	0.82	0.55	0.85	0.94
BC89	1.41	0.25	1.37	0.16	1.44	0.28	0.97	0.65	1.02	1.12
BC99	1.17	0.21	1.07	0.14	1.11	0.25	0.92	0.6[illegible]	0.95	1.19
BD31	1.23	0.18	1.23	0.13	1.18	0.22	1	0.[illegible]	0.96	1.21
BD33	1.32	0.2	1.4	0.15	1.36	0.25	1.06	0.74	1.03	1.26
BD35	1.29	0.19	1.36	0.14	1.36	0.25	1.05	0.74	1.06	1.33
BD37	1.31	0.17	1.41	0.14	1.49	0.26	1.08	0.79	1.14	1.49
BD39	1.36	0.18	1.46	0.15	1.52	0.26	1.07	0.81	1.11	1.47
BD41	1.33	0.21	1.38	0.14	1.41	0.24	1.04	0.68	1.06	1.15
BD43	1.17	0.17	1.21	0.12	1.28	0.24	1.03	0.72	1.09	1.45
BD45	1.23	0.17	1.29	0.13	1.36	0.25	1.05	0.74	1.11	1.41
BD47	1.29	0.17	1.39	0.14	1.47	0.26	1.08	0.81	1.14	1.5
BD49	1.31	0.18	1.45	0.15	1.52	0.27	1.11	0.85	1.16	1.51
BD51	1.32	0.21	1.39	0.15	1.42	0.25	1.05	0.73	1.07	1.22
BD53	1.22	0.18	1.2	0.12	1.28	0.24	0.99	0.66	1.05	1.32
BD55	1.29	0.18	1.42	0.15	1.49	0.26	1.1	0.83	1.15	1.47
BD57	1.08	0.15	1.12	0.12	1.19	0.23	1.04	0.76	1.1	1.51
BD59	1.34	0.19	1.48	0.15	1.53	0.27	1.11	0.81	1.14	1.46
BD61	1.44	0.24	1.47	0.18	1.5	0.28	1.03	0.74	1.05	1.16
BD63	1.24	0.18	1.28	0.14	1.33	0.26	1.04	0.77	1.07	1.39
BD65	1.42	0.21	1.52	0.16	1.59	0.28	1.07	0.77	1.12	1.35
BD67	1.27	0.18	1.37	0.15	1.43	0.27	1.08	0.84	1.12	1.46
BD69	1.32	0.19	1.4	0.14	1.49	0.26	1.06	0.76	1.12	1.4
BD71	1.59	0.26	1.73	0.2	1.73	0.31	1.09	0.77	1.09	1.19
BD73	1.23	0.19	1.31	0.15	1.36	0.26	1.07	0.78	1.11	1.34
BD75	1.29	0.2	1.43	0.16	1.53	0.29	1.11	0.81	1.19	1.43
BD77	1.25	0	1.2	0.13	1.26	0.26	0.96	0	1.01	0
BD79	1.35	0.2	1.44	0.17	1.53	0.28	1.06	0.83	1.13	1.39
BD81	1.59	0.26	1.68	0.2	1.69	0.31	1.05	0.79	1.06	1.19
BD83	1.3	0.21	1.39	0.16	1.49	0.27	1.07	0.78	1.14	1.3
BD85	1.51	0.22	1.62	0.18	1.65	0.29	1.08	0.82	1.1	1.29
BD87	1.25	0.19	1.3	0.16	1.4	0.28	1.04	0.84	1.12	1.46
BD89	1.3	0.21	1.34	0.17	1.42	0.28	1.03	0.8	1.09	1.38
BD91	1.38	0.23	1.44	0.18	1.49	0.29	1.05	0.79	1.08	1.24
BD93	1.67	0.27	1.7	0.21	1.72	0.31	1.02	0.79	1.03	1.15
BD95	1.5	0.23	1.61	0.19	1.65	0.3	1.07	0.79	1.1	1.27
BD97	1.35	0.22	1.42	0.18	1.47	0.29	1.05	0.82	1.09	1.29
BD99	1.22	0.2	1.28	0.17	1.41	0.3	1.05	0.85	1.15	1.51
BE31	1.44	0.23	1.56	0.18	1.66	0.3	1.08	0.78	1.15	1.33
BE41	1.23	0.19	1.35	0.15	1.43	0.26	1.1	0.79	1.16	1.35
BE51	1.33	0.18	1.46	0.15	1.52	0.27	1.1	0.81	1.14	1.49
BE61	1.32	0.19	1.43	0.15	1.57	0.29	1.08	0.78	1.19	1.51
BE71	1.37	0.19	1.46	0.15	1.54	0.28	1.06	0.76	1.13	1.42
BE81	1.31	0.2	1.44	0.17	1.53	0.29	1.1	0.84	1.17	1.43
BE91	1.2	0.2	1.24	0.16	1.33	0.28	1.04	0.82	1.12	1.44
CB77	1.12	0.2	1.07	0.15	1.11	0.26	0.95	0.74	0.99	1.27
CB79	1.07	0.2	1.05	0.15	1.09	0.26	0.98	0.77	1.01	1.31
CB87	1.45	0.24	1.58	0.22	1.55	0.31	1.08	0.91	1.07	1.29
CB89	1.47	0.25	1.61	0.23	1.6	0.32	1.09	0.91	1.09	1.29
CB97	1.46	0.25	1.59	0.23	1.61	0.33	1.09	0.92	1.11	1.33
CB99	1.49	0.25	1.65	0.24	1.67	0.34	1.11	0.94	1.12	1.36
CC17	1.29	0.25	1.09	0.15	1.15	0.27	0.84	0.6	0.89	1.06

Appendix A-4b (Continued):

Weather grid	BL		SN_r		SN_w		SN_r/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	1.12	0.19	1.13	0.15	1.18	0.26	1.01	0.8	1.05	1.39
CC25	1.3	0.26	1.04	0.15	1.1	0.27	0.8	0.56	0.85	1.02
CC27	1.09	0.2	1.01	0.14	1.04	0.25	0.93	0.68	0.96	1.2
CC29	1.18	0.21	1.23	0.17	1.31	0.28	1.04	0.79	1.11	1.31
CC35	1.15	0.21	1.09	0.16	1.15	0.27	0.95	0.76	1	1.3
CC37	1.07	0.18	1.09	0.15	1.15	0.27	1.02	0.83	1.07	1.47
CC39	1.16	0.2	1.22	0.17	1.3	0.28	1.05	0.83	1.12	1.39
CC43	1.19	0.21	1.15	0.16	1.21	0.27	0.97	0.75	1.02	1.27
CC45	1.17	0.21	1.2	0.17	1.26	0.28	1.02	0.8	1.08	1.33
CC47	1.18	0.22	1.23	0.18	1.31	0.29	1.04	0.81	1.11	1.35
CC49	1.13	0.19	1.17	0.16	1.27	0.28	1.04	0.82	1.13	1.44
CC53	1.21	0.22	1.16	0.16	1.23	0.29	0.96	0.72	1.01	1.27
CC55	1.19	0.22	1.21	0.18	1.3	0.29	1.02	0.8	1.09	1.33
CC57	1.18	0.22	1.24	0.18	1.33	0.3	1.05	0.82	1.13	1.35
CC59	1.14	0.2	1.18	0.17	1.22	0.27	1.03	0.84	1.07	1.39
CC65	1.15	0.22	1.15	0.17	1.21	0.28	1	0.78	1.06	1.31
CC67	1.18	0.22	1.24	0.18	1.32	0.29	1.05	0.81	1.12	1.33
CC69	1.15	0.21	1.19	0.18	1.23	0.28	1.03	0.83	1.07	1.33
CC77	1.24	0.24	1.21	0.2	1.3	0.3	0.98	0.82	1.05	1.26
CC79	1.21	0.22	1.27	0.19	1.36	0.31	1.05	0.84	1.12	1.39
CC87	1.09	0.21	1.03	0.14	1.07	0.26	0.94	0.7	0.98	1.26
CC89	1.19	0.23	1.24	0.19	1.33	0.31	1.04	0.84	1.11	1.38
CC97	1.07	0.19	1.1	0.16	1.15	0.27	1.03	0.84	1.08	1.44
CD11	1.46	0.23	1.51	0.2	1.54	0.31	1.04	0.85	1.05	1.32
CD13	1.45	0.24	1.59	0.19	1.57	0.31	1.09	0.79	1.08	1.28
CD15	1.31	0.21	1.36	0.17	1.39	0.28	1.04	0.83	1.07	1.31
CD17	1.32	0.22	1.38	0.18	1.4	0.28	1.05	0.81	1.07	1.27
CD19	1.43	0.24	1.54	0.2	1.58	0.32	1.07	0.84	1.11	1.32
CD21	1.19	0.21	1.26	0.17	1.36	0.29	1.06	0.82	1.14	1.4
CD23	1.45	0.24	1.53	0.21	1.56	0.31	1.05	0.84	1.07	1.25
CD25	1.42	0.22	1.55	0.19	1.54	0.29	1.09	0.86	1.08	1.31
CD27	1.6	0.25	1.77	0.22	1.78	0.32	1.11	0.85	1.12	1.26
CD29	1.38	0.24	1.43	0.19	1.46	0.31	1.03	0.8	1.05	1.27
CD31	1.16	0.18	1.27	0.17	1.36	0.29	1.09	0.93	1.17	1.58
CD33	1.97	0.29	1.99	0.25	1.93	0.34	1.01	0.86	0.98	1.16
CD35	1.41	0.24	1.48	0.2	1.48	0.3	1.05	0.86	1.05	1.27
CD37	1.43	0.24	1.56	0.21	1.57	0.31	1.09	0.88	1.1	1.28
CD39	1.59	0.27	1.79	0.23	1.84	0.34	1.12	0.86	1.16	1.27
CD41	1.47	0.24	1.46	0.19	1.5	0.3	0.99	0.76	1.01	1.21
CD43	1.18	0.2	1.25	0.17	1.29	0.27	1.06	0.85	1.09	1.41
CD45	1.98	0.3	2	0.25	1.97	0.34	1.01	0.84	1	1.15
CD47	1.42	0.24	1.5	0.21	1.51	0.32	1.06	0.87	1.06	1.31
CD49	1.61	0.28	1.79	0.25	1.83	0.35	1.11	0.88	1.14	1.25
CD51	1.15	0.19	1.2	0.16	1.23	0.28	1.04	0.83	1.07	1.45
CD53	1.62	0.25	1.81	0.22	1.85	0.33	1.12	0.85	1.14	1.3
CD55	2.02	0.31	2.09	0.28	2.04	0.37	1.03	0.89	1.01	1.17
CD57	1.62	0.28	1.84	0.25	1.84	0.34	1.14	0.88	1.14	1.24
CD59	1.61	0.28	1.85	0.25	1.87	0.35	1.15	0.91	1.16	1.26
CD61	1.42	0.24	1.5	0.21	1.5	0.31	1.06	0.86	1.06	1.28
CD63	1.17	0.21	1.25	0.18	1.27	0.28	1.07	0.84	1.08	1.33
CD67	1.15	0.22	1.23	0.18	1.29	0.3	1.07	0.82	1.12	1.36
CD69	1.18	0.22	1.25	0.19	1.3	0.31	1.06	0.85	1.1	1.38
CD71	1.12	0.21	1.17	0.18	1.2	0.28	1.04	0.84	1.07	1.35
CD73	1.11	0.2	1.14	0.16	1.17	0.27	1.03	0.8	1.06	1.39
CD77	1.14	0.21	1.19	0.19	1.25	0.29	1.05	0.87	1.1	1.38
CD79	1.17	0.22	1.24	0.19	1.29	0.3	1.07	0.83	1.1	1.35
CD81	1.12	0.22	1.16	0.17	1.21	0.29	1.04	0.81	1.08	1.33

Appendix A-4b (Continued):

Weather grid	BL		SN_l		SN_φ		SN_l/BL		SN_φ/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	1.14	0.21	1.18	0.18	1.24	0.29	1.04	0.84	1.09	1.37
CD85	1.12	0.21	1.17	0.17	1.2	0.28	1.04	0.82	1.07	1.34
CE11	1.27	0.22	1.29	0.17	1.38	0.29	1.01	0.78	1.09	1.31
CE21	1.17	0.2	1.24	0.17	1.3	0.29	1.06	0.84	1.11	1.4
CE31	1.57	0.27	1.75	0.23	1.8	0.34	1.11	0.85	1.14	1.25
CE41	1.59	0.28	1.73	0.23	1.8	0.35	1.09	0.85	1.13	1.25
CE51	1.21	0.22	1.3	0.19	1.37	0.31	1.07	0.85	1.13	1.37
CE61	1.21	0.23	1.3	0.19	1.37	0.3	1.07	0.84	1.13	1.35
CE71	1.19	0.23	1.27	0.19	1.34	0.31	1.07	0.82	1.13	1.34
DB15	1.13	0.21	1.17	0.16	1.25	0.28	1.04	0.78	1.11	1.36
DB17	1.12	0.2	1.17	0.16	1.25	0.27	1.04	0.79	1.11	1.35
DB19	1.5	0.25	1.66	0.23	1.68	0.34	1.11	0.94	1.12	1.37
DB25	1.33	0.25	1.39	0.2	1.47	0.32	1.05	0.8	1.11	1.27
DB27	1.35	0.27	1.42	0.22	1.52	0.33	1.05	0.85	1.12	1.25
DB29	1.35	0.26	1.42	0.22	1.51	0.33	1.05	0.84	1.12	1.26
DC11	1.1	0.2	1.16	0.16	1.24	0.27	1.06	0.83	1.13	1.38
DC13	1.36	0.25	1.44	0.22	1.51	0.33	1.06	0.87	1.11	1.31
DC21	1.35	0.26	1.44	0.21	1.53	0.33	1.06	0.83	1.13	1.29
DC23	1.69	0.31	1.84	0.27	1.92	0.38	1.09	0.86	1.14	1.22
DC31	1.48	0.28	1.61	0.25	1.7	0.36	1.08	0.91	1.15	1.29
DC33	1.71	0.32	1.86	0.29	1.95	0.4	1.09	0.89	1.14	1.24
DC71	1.14	0.24	1.14	0.2	1.26	0.32	1	0.82	1.1	1.32
DC73	1.18	0.25	1.19	0.21	1.3	0.33	1.01	0.82	1.1	1.3
DC75	1.17	0.24	1.21	0.2	1.34	0.33	1.04	0.85	1.15	1.39

Appendix A-4c: Annual canola residue (t/ha) from canola-wheat-fallow averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	1.55	0.89	1.75	0.97	1.9	1.07	1.13	1.08	1.22	1.2
BC59	1.69	1	2.09	1.13	2.21	1.3	1.24	1.13	1.31	1.3
BC69	1.53	0.92	2.04	1.1	2.17	1.24	1.33	1.19	1.41	1.35
BC79	1.53	0.91	1.93	1.12	2.16	1.25	1.26	1.24	1.42	1.38
BC89	1.74	1.02	2	1.14	2.11	1.2	1.15	1.12	1.21	1.17
BC99	1.69	0.97	1.82	1.04	2.22	1.32	1.08	1.08	1.31	1.37
BD31	1.64	0.85	1.92	1.04	2.07	1.13	1.17	1.22	1.26	1.32
BD33	1.61	0.89	1.91	1.02	2.05	1.15	1.19	1.15	1.27	1.3
BD35	1.52	0.9	1.68	0.92	1.83	1.11	1.11	1.03	1.2	1.23
BD37	1.35	0.75	1.49	0.81	1.75	1.05	1.1	1.08	1.3	1.4
BD39	1.42	0.81	1.5	0.81	1.78	1.01	1.05	1	1.25	1.24
BD41	1.82	1.03	2.04	1.12	2.04	1.23	1.13	1.09	1.12	1.19
BD43	1.52	0.86	1.5	0.83	1.78	1.03	0.98	0.97	1.17	1.2
BD45	1.31	0.71	1.36	0.74	1.7	1	1.04	1.04	1.3	1.41
BD47	1.25	0.67	1.33	0.7	1.66	0.94	1.07	1.04	1.33	1.4
BD49	1.29	0.71	1.42	0.77	1.69	1	1.1	1.08	1.31	1.41
BD51	1.75	1	2.07	1.16	2.28	1.33	1.19	1.15	1.31	1.33
BD53	1.49	0.84	1.39	0.76	1.61	0.93	0.94	0.9	1.08	1.1
BD55	1.48	0.82	1.43	0.74	1.65	1.01	0.96	0.9	1.11	1.24
BD57	1.38	0.77	1.33	0.68	1.59	0.89	0.96	0.88	1.15	1.15
BD59	1.27	0.73	1.41	0.74	1.62	0.97	1.11	1.01	1.27	1.32
BD61	1.83	1.05	2.08	1.19	2.29	1.35	1.14	1.13	1.25	1.29
BD63	1.55	0.87	1.44	0.83	1.72	1.02	0.93	0.95	1.11	1.16
BD65	1.5	0.86	1.45	0.81	1.86	1.1	0.97	0.94	1.24	1.27
BD67	1.45	0.83	1.49	0.8	1.84	1.09	1.03	0.96	1.27	1.31
BD69	1.27	0.74	1.28	0.7	1.69	0.99	1.01	0.94	1.33	1.34
BD71	1.91	1.04	2.03	1.12	2.18	1.26	1.07	1.08	1.14	1.22
BD73	1.67	0.99	1.68	0.95	1.95	1.15	1.01	0.96	1.17	1.16
BD75	1.59	0.93	1.61	0.9	1.89	1.13	1.01	0.97	1.19	1.21
BD77	1.12	0.64	1.25	0.71	1.56	0.87	1.11	1.1	1.39	1.35
BD79	1.32	0.76	1.37	0.76	1.84	1.12	1.04	1.01	1.39	1.48
BD81	2.02	1.16	1.98	1.11	2.15	1.25	0.98	0.95	1.06	1.08
BD83	1.7	0.96	1.64	0.92	1.68	1.04	0.97	0.96	0.99	1.08
BD85	1.63	0.92	1.57	0.91	1.84	1.04	0.96	0.99	1.13	1.13
BD87	1.4	0.81	1.46	0.83	1.88	1.11	1.04	1.03	1.34	1.38
BD89	1.36	0.8	1.47	0.83	1.88	1.11	1.08	1.04	1.38	1.4
BD91	1.99	1.14	1.94	1.08	2.05	1.15	0.97	0.95	1.03	1.01
BD93	1.82	1.03	1.7	0.98	1.91	1.13	0.94	0.95	1.05	1.1
BD95	1.74	0.97	1.69	0.94	1.87	1.14	0.97	0.96	1.08	1.17
BD97	1.71	0.99	1.76	1.01	1.96	1.2	1.03	1.02	1.15	1.21
BD99	1.57	0.92	1.64	0.96	1.91	1.08	1.04	1.04	1.22	1.17
BE31	1.37	0.8	1.55	0.85	1.81	1.07	1.13	1.06	1.32	1.34
BE41	1.49	0.85	1.68	0.91	1.97	1.11	1.13	1.06	1.33	1.3
BE51	1.35	0.78	1.39	0.8	1.72	1	1.03	1.03	1.27	1.28
BE61	1.2	0.69	1.26	0.71	1.7	1.02	1.05	1.03	1.42	1.47
BE71	1.17	0.64	1.25	0.71	1.66	0.99	1.06	1.12	1.41	1.55
BE81	1.4	0.79	1.54	0.85	1.88	1.09	1.1	1.07	1.34	1.37
BE91	1.42	0.83	1.53	0.85	1.78	1.03	1.08	1.03	1.25	1.25
CB77	1.69	1	2	1.04	2.27	1.24	1.18	1.04	1.34	1.23
CB79	1.71	0.91	1.86	0.99	2.14	1.2	1.09	1.09	1.25	1.32
CB87	1.71	0.97	2	1.07	2.12	1.19	1.17	1.11	1.24	1.23
CB89	1.84	1.01	1.93	1.07	2.13	1.17	1.05	1.06	1.16	1.17
CB97	1.76	1.01	1.89	1	2.08	1.12	1.08	0.99	1.18	1.11
CB99	1.79	1	1.92	1.06	2.06	1.16	1.07	1.06	1.15	1.16
CC17	1.64	1.05	1.98	1.12	2.38	1.37	1.21	1.07	1.46	1.31

Appendix A-4c (Continued):

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	1.8	1.01	1.91	1.01	2.19	1.2	1.06	1	1.22	1.19
CC25	1.53	0.95	2.1	1.15	2.37	1.47	1.37	1.22	1.55	1.55
CC27	1.93	1.04	2.07	1.12	2.31	1.29	1.08	1.08	1.2	1.24
CC29	1.9	1.12	1.96	1.12	2.08	1.18	1.03	1	1.1	1.06
CC35	1.84	1.07	2.08	1.11	2.34	1.27	1.13	1.04	1.27	1.19
CC37	1.67	0.96	1.9	0.95	2.17	1.28	1.14	0.98	1.3	1.32
CC39	1.92	1.07	2	1.19	2.13	1.24	1.04	1.11	1.11	1.16
CC43	1.79	1.06	1.97	1.06	2.18	1.25	1.1	1	1.22	1.18
CC45	1.81	1.06	2.04	1.12	2.1	1.22	1.13	1.06	1.16	1.16
CC47	1.88	1.05	2.13	1.2	2.1	1.24	1.14	1.14	1.12	1.18
CC49	2.1	1.21	2.09	1.17	2.18	1.28	1	0.96	1.04	1.05
CC53	1.78	1.06	2.16	1.14	2.17	1.27	1.21	1.08	1.22	1.19
CC55	1.75	1.07	2.1	1.26	2.14	1.25	1.2	1.18	1.22	1.17
CC57	1.88	1.07	2.09	1.14	2.13	1.28	1.11	1.06	1.13	1.19
CC59	2.15	1.26	2.07	1.12	2.14	1.22	0.96	0.89	0.99	0.97
CC65	1.65	0.94	1.89	0.98	2.15	1.26	1.14	1.04	1.31	1.34
CC67	1.97	1.21	2.06	1.21	2.2	1.33	1.05	1	1.12	1.1
CC69	2.08	1.2	2	1.14	2.13	1.13	0.96	0.95	1.02	0.94
CC77	1.82	1.08	2.15	1.17	2.11	1.19	1.18	1.09	1.16	1.11
CC79	1.95	1.1	2.09	1.16	2.17	1.34	1.07	1.06	1.11	1.22
CC87	1.79	1.03	1.96	1.05	2.34	1.31	1.1	1.02	1.31	1.27
CC89	1.99	1.16	1.98	1.12	2.08	1.18	0.99	0.97	1.04	1.02
CC97	1.99	1.13	1.96	1.12	2.11	1.23	0.99	0.99	1.06	1.09
CD11	1.93	1.11	1.97	1.13	2.15	1.23	1.02	1.01	1.11	1.11
CD13	1.87	1.03	1.91	1.07	2.1	1.15	1.02	1.04	1.12	1.12
CD15	1.72	0.93	1.8	1.01	1.94	1.08	1.05	1.09	1.13	1.17
CD17	1.8	1	1.78	1.02	1.96	1.14	0.99	1.01	1.09	1.14
CD19	1.81	1.04	1.89	1.07	2.04	1.26	1.04	1.02	1.13	1.21
CD21	2.01	1.16	1.99	1.07	2.07	1.19	0.99	0.92	1.03	1.03
CD23	1.98	1.13	1.86	1.02	2.07	1.19	0.94	0.9	1.05	1.05
CD25	1.77	1.03	1.78	0.98	1.91	1.11	1	0.95	1.08	1.08
CD27	1.81	1.05	1.79	0.99	1.95	1.11	0.99	0.93	1.08	1.05
CD29	1.8	1.04	1.7	0.96	1.92	1.11	0.94	0.92	1.07	1.06
CD31	2.02	1.16	1.88	1.05	2.02	1.07	0.93	0.91	1	0.93
CD33	1.9	1.04	1.88	1.03	2.06	1.18	0.99	0.99	1.08	1.13
CD35	1.85	1.04	1.81	0.97	2.06	1.19	0.98	0.93	1.12	1.14
CD37	1.95	1.1	1.88	1.02	1.97	1.16	0.96	0.93	1.01	1.05
CD39	1.89	1.06	1.82	1.03	2.02	1.17	0.96	0.97	1.07	1.1
CD41	2.11	1.22	2.03	1.09	2.17	1.24	0.96	0.89	1.03	1.01
CD43	2.03	1.16	1.92	1.07	1.94	1.1	0.95	0.92	0.96	0.95
CD45	1.9	1.08	1.85	1.02	2.03	1.15	0.98	0.94	1.07	1.06
CD47	1.88	1.09	1.84	1.02	1.97	1.13	0.98	0.94	1.05	1.04
CD49	2	1.15	1.91	1.05	2.03	1.2	0.95	0.91	1.02	1.05
CD51	2.1	1.21	1.81	1.05	2.08	1.11	0.86	0.87	0.99	0.92
CD53	1.97	1.12	1.78	0.97	1.94	1.09	0.91	0.86	0.99	0.97
CD55	1.96	1.13	1.88	1.03	2.07	1.19	0.96	0.91	1.06	1.05
CD57	1.77	1	1.69	0.94	1.93	1.11	0.96	0.94	1.09	1.11
CD59	1.98	1.15	1.91	1.05	1.95	1.12	0.97	0.92	0.99	0.98
CD61	2.09	1.21	2	1.03	2.15	1.24	0.96	0.86	1.03	1.03
CD63	2.1	1.23	2.02	1.13	2.06	1.18	0.96	0.92	0.98	0.96
CD67	2.07	1.23	2.06	1.16	2.09	1.11	0.99	0.94	1.01	0.9
CD69	1.81	1.03	1.63	0.86	1.81	1.1	0.9	0.84	1	1.07
CD71	2.08	1.23	2.13	1.21	2.22	1.29	1.03	0.98	1.06	1.05
CD73	1.94	1.16	1.79	0.97	2.1	1.18	0.92	0.83	1.08	1.02
CD77	2.08	1.21	2.06	1.18	2.07	1.15	0.99	0.97	0.99	0.95
CD79	2.06	1.2	2.06	1.15	2.13	1.15	1	0.96	1.03	0.96
CD81	2.12	1.25	2.19	1.26	2.23	1.25	1.03	1.01	1.05	1

Weather grid	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	2.05	1.21	2.12	1.16	2.14	1.19	1.03	0.96	1.04	0.99
CD85	2.08	1.22	2.05	1.14	2.14	1.18	0.99	0.93	1.03	0.96
CE11	1.57	0.89	1.6	0.92	1.79	1.03	1.02	1.04	1.14	1.16
CE21	1.8	1	1.79	0.94	1.92	1.15	1	0.94	1.06	1.15
CE31	1.8	1.04	1.7	0.99	1.88	1.11	0.94	0.95	1.04	1.07
CE41	1.87	1.07	1.79	1.01	1.94	1.14	0.96	0.95	1.04	1.06
CE51	1.89	1.11	1.81	1.02	1.97	1.17	0.96	0.92	1.04	1.05
CE61	2.01	1.18	1.95	1.09	1.96	1.17	0.97	0.92	0.98	0.99
CE71	1.95	1.14	1.96	1.09	2.08	1.21	1.01	0.95	1.07	1.06
DB15	1.81	1.07	2.04	1.08	2.03	1.14	1.12	1.01	1.12	1.06
DB17	1.84	1.01	1.93	1.02	2	1.16	1.05	1.01	1.09	1.15
DB19	1.82	1.03	1.87	1.02	2.03	1.14	1.03	0.99	1.11	1.11
DB25	1.95	1.14	2.09	1.18	2.14	1.16	1.07	1.03	1.1	1.01
DB27	2.02	1.17	2.11	1.17	2.26	1.28	1.04	1	1.11	1.09
DB29	2.04	1.19	2	1.15	2.16	1.29	0.98	0.97	1.06	1.08
DC11	1.8	1.02	1.9	1.06	1.89	1.11	1.06	1.04	1.05	1.09
DC13	1.91	1.09	1.98	1.09	2.02	1.23	1.03	1	1.06	1.13
DC21	1.92	1.1	1.96	1.11	2.09	1.22	1.02	1.01	1.09	1.11
DC23	1.88	1.07	2.01	1.12	2.01	1.15	1.07	1.04	1.07	1.07
DC31	1.9	1.08	2.01	1.09	2.03	1.19	1.06	1.01	1.07	1.1
DC33	1.97	1.14	2.04	1.13	2.14	1.24	1.03	0.99	1.09	1.09
DC71	1.81	1.08	1.84	1.1	2.09	1.24	1.01	1.02	1.15	1.15
DC73	1.54	0.95	1.67	0.93	1.81	0.97	1.08	0.98	1.17	1.03
DC75	1.78	1.03	1.86	1.03	1.97	1.22	1.04	1	1.11	1.18

Appendix A-4d: Annual wheat residue (t/ha) from canola-wheat-fallow averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	1.65	0.97	2.11	1.26	1.72	0.76	1.28	1.29	1.04	0.78
BC59	1.55	0.9	2.66	1.17	1.84	0.95	1.72	1.3	1.18	1.06
BC69	1.27	0.76	1.73	0.91	1.59	0.9	1.36	1.21	1.25	1.19
BC79	1.14	0.69	1.46	0.64	1.39	0.59	1.27	0.92	1.22	0.86
BC89	1.65	0.91	2.31	1.46	1.92	0.87	1.4	1.6	1.16	0.95
BC99	1.19	0.72	1.48	0.72	1.6	0.73	1.25	1.01	1.35	1.02
BD31	1.53	0.77	1.57	0.65	1.66	0.7	1.03	0.85	1.09	0.9
BD33	1.45	0.74	1.6	0.73	1.64	0.75	1.11	0.99	1.13	1.02
BD35	1.73	1.04	1.97	1.14	1.31	0.66	1.14	1.09	0.76	0.63
BD37	1.56	0.76	1.87	0.94	1.35	0.54	1.2	1.23	0.87	0.71
BD39	1.78	1.18	1.98	1.1	1.95	0.84	1.11	0.93	1.09	0.71
BD41	2.43	1.26	2.42	1.23	1.9	0.9	1	0.97	0.78	0.71
BD43	1.66	0.92	1.5	0.8	1.44	0.72	0.9	0.86	0.86	0.78
BD45	1.94	1.13	1.55	0.71	1.85	0.67	0.8	0.63	0.96	0.59
BD47	1.49	0.88	1.45	0.61	1.23	0.54	0.97	0.69	0.83	0.62
BD49	1.45	0.91	1.73	1.16	1.37	0.61	1.2	1.28	0.95	0.67
BD51	1.8	0.95	2.32	0.95	2.43	1.21	1.29	1	1.35	1.27
BD53	1.36	0.79	1.48	0.83	1	0.63	1.09	1.05	0.74	0.8
BD55	1.94	1.18	1.96	1.22	1.41	0.63	1.01	1.03	0.73	0.53
BD57	1.88	1.1	1.93	1.02	1.34	0.87	1.02	0.93	0.71	0.79
BD59	1.6	0.93	1.94	1.02	1.3	0.62	1.21	1.1	0.81	0.66
BD61	2.07	1.01	2.44	1.37	1.73	0.78	1.18	1.35	0.84	0.77
BD63	2.17	1.11	1.56	0.92	1.59	0.75	0.72	0.83	0.73	0.67
BD65	2.19	1.41	2.03	1.04	1.42	0.63	0.93	0.74	0.65	0.44
BD67	2.1	1.22	2.07	1.11	2.03	1.09	0.98	0.91	0.96	0.9
BD69	1.75	1.11	1.7	0.97	1.84	0.78	0.97	0.88	1.05	0.7
BD71	2.46	1.24	2.88	1.31	1.68	0.79	1.17	1.06	0.68	0.64
BD73	2.2	1.43	2.39	1.27	2.3	1.25	1.09	0.89	1.05	0.87
BD75	2.24	1.48	1.72	1.05	1.69	0.57	0.77	0.71	0.75	0.39
BD77	1.12	0.74	1.23	0.57	1.48	0.94	1.1	0.77	1.33	1.27
BD79	1.81	1.16	1.87	1.13	1.94	1.1	1.04	0.98	1.08	0.95
BD81	2.9	1.55	2.22	1.11	1.69	0.82	0.77	0.71	0.58	0.53
BD83	2.53	1.47	2.22	1.31	2.12	0.91	0.88	0.89	0.84	0.62
BD85	2.4	1.37	2.26	1.16	1.76	0.71	0.94	0.85	0.73	0.52
BD87	1.88	1.03	2.11	1.06	1.85	0.9	1.12	1.03	0.98	0.88
BD89	1.84	1.25	2.29	1.35	2.38	1.15	1.24	1.09	1.29	0.92
BD91	2.81	1.52	3.05	1.45	2.23	1.02	1.08	0.95	0.79	0.67
BD93	2.75	1.6	2.41	1.38	1.62	0.82	0.88	0.86	0.59	0.51
BD95	2.54	1.21	1.8	1.07	1.57	0.71	0.71	0.88	0.62	0.59
BD97	2.54	1.6	2.52	1.06	1.44	0.67	0.99	0.66	0.57	0.42
BD99	2.08	1.3	2.4	1.45	1.98	0.65	1.16	1.12	0.96	0.5
BE31	1.64	1.04	2.05	1.1	1.69	0.8	1.25	1.06	1.03	0.77
BE41	1.59	0.91	2.17	0.96	1.36	0.52	1.37	1.05	0.85	0.57
BE51	1.79	1.14	1.77	0.92	1.81	0.67	0.99	0.81	1.01	0.59
BE61	1.7	1.01	1.92	1.02	1.53	0.87	1.13	1.01	0.9	0.87
BE71	1.67	0.87	1.93	0.98	1.57	0.73	1.15	1.13	0.94	0.84
BE81	2.01	1.25	2.25	1.24	2.25	0.91	1.12	0.99	1.11	0.73
BE91	1.91	1.08	2.15	1.06	1.74	0.67	1.12	0.98	0.91	0.62
CB77	1.33	0.68	2.03	0.64	1.63	0.72	1.53	0.94	1.22	1.06
CB79	1.44	0.7	1.67	0.83	1.62	0.74	1.16	1.18	1.12	1.06
CB87	1.85	0.9	2.59	1.1	1.68	0.82	1.4	1.21	0.91	0.9
CB89	2.33	1	2.18	1.05	1.71	0.83	0.94	1.05	0.73	0.83
CB97	1.86	0.71	2.28	0.92	1.78	0.77	1.23	1.29	0.96	1.09
CB99	2.17	0.85	2.7	1.21	1.64	0.8	1.25	1.42	0.76	0.94
CC17	1.15	0.8	1.29	0.73	1.53	0.91	1.13	0.92	1.34	1.14

Appendix A-4d (Continued):

Weather grid	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	1.59	0.68	1.48	0.67	1.58	0.65	0.93	0.98	0.99	0.95
CC25	1.14	0.77	1.48	0.75	1.55	0.9	1.29	0.98	1.35	1.17
CC27	1.62	0.87	1.64	0.73	1.77	0.8	1.01	0.85	1.09	0.92
CC29	1.88	0.84	1.46	0.73	1.55	0.56	0.78	0.87	0.83	0.66
CC35	1.55	0.81	1.62	0.66	1.68	0.7	1.05	0.82	1.09	0.86
CC37	1.4	0.63	1.54	0.67	1.37	0.73	1.1	1.06	0.98	1.17
CC39	2.2	0.87	2.55	1.6	1.55	0.7	1.16	1.84	0.7	0.81
CC43	1.53	0.71	1.55	0.55	1.54	0.6	1.02	0.78	1.01	0.84
CC45	1.8	0.77	2.39	0.64	1.55	0.65	1.33	0.83	0.86	0.85
CC47	2	0.93	2.91	1.51	1.56	0.58	1.46	1.62	0.78	0.62
CC49	3.08	1.7	3.24	1.5	2.71	1.25	1.05	0.88	0.88	0.74
CC53	1.46	0.75	2.5	1.13	1.67	0.73	1.7	1.51	1.14	0.97
CC55	1.63	0.79	2.29	1.72	1.76	0.59	1.4	2.19	1.08	0.75
CC57	1.93	0.73	2.25	0.73	1.59	0.62	1.17	1.01	0.82	0.86
CC59	3.14	1.59	2.6	1.39	1.61	0.72	0.83	0.88	0.51	0.45
CC65	1.41	0.69	1.51	0.64	1.6	0.68	1.07	0.92	1.13	0.98
CC67	2.24	1.37	2.39	1.39	1.96	1	1.07	1.01	0.87	0.73
CC69	2.97	1.38	2.67	1.3	1.71	0.78	0.9	0.95	0.58	0.56
CC77	2	0.88	2.47	0.72	1.6	0.58	1.24	0.81	0.8	0.66
CC79	2.44	0.92	2.46	0.99	1.87	1.05	1.01	1.08	0.77	1.15
CC87	1.64	0.76	1.6	0.63	1.77	0.78	0.97	0.83	1.08	1.03
CC89	2.39	1.03	1.48	0.8	1.74	0.73	0.62	0.77	0.73	0.7
CC97	2.68	1.23	1.82	0.8	1.58	0.73	0.68	0.65	0.59	0.6
CD11	2.65	1.47	1.63	0.76	1.75	0.81	0.62	0.52	0.66	0.55
CD13	2.49	1.02	2.27	0.94	1.61	0.72	0.91	0.92	0.65	0.7
CD15	2.29	1.2	2.53	1.34	1.55	0.6	1.1	1.12	0.68	0.5
CD17	2.63	1.39	2.73	1.58	1.58	0.63	1.04	1.14	0.6	0.45
CD19	2.54	1.42	2.87	1.8	1.55	0.69	1.13	1.27	0.61	0.48
CD21	2.97	1.64	2.96	1.35	1.83	0.83	1	0.82	0.62	0.51
CD23	2.92	1.64	2.04	0.76	1.65	0.79	0.7	0.46	0.57	0.48
CD25	2.44	1.26	1.43	0.63	1.53	0.66	0.59	0.5	0.63	0.53
CD27	2.5	1.41	1.6	0.79	1.68	0.7	0.64	0.56	0.67	0.5
CD29	2.51	1.27	2.51	1.23	1.72	0.76	1	0.97	0.68	0.6
CD31	3.03	1.56	1.54	0.61	1.6	0.64	0.51	0.39	0.53	0.41
CD33	2.55	1.21	1.8	0.95	1.91	1	0.71	0.79	0.75	0.83
CD35	2.73	1.35	1.66	0.83	1.64	0.76	0.61	0.62	0.6	0.56
CD37	2.9	1.63	2.98	1.41	1.66	0.69	1.03	0.87	0.57	0.42
CD39	2.46	1.11	2.22	0.74	1.86	0.7	0.9	0.67	0.76	0.63
CD41	3.2	1.73	2.9	1.57	1.75	0.82	0.91	0.91	0.55	0.48
CD43	3.05	1.77	3.09	1.51	1.51	0.66	1.01	0.85	0.5	0.37
CD45	2.94	1.56	2.26	0.95	1.86	0.96	0.77	0.61	0.63	0.62
CD47	2.71	1.4	2.36	0.91	1.57	0.75	0.87	0.65	0.58	0.53
CD49	2.98	1.86	2.83	1.23	1.62	0.77	0.95	0.66	0.54	0.41
CD51	3.14	1.78	1.8	0.74	1.56	0.6	0.57	0.42	0.5	0.34
CD53	3.03	1.69	1.9	0.73	1.72	0.75	0.63	0.43	0.57	0.45
CD55	2.99	1.73	2.4	0.98	1.87	0.98	0.8	0.57	0.62	0.57
CD57	2.53	1.32	1.78	0.96	1.6	0.81	0.7	0.73	0.63	0.62
CD59	2.96	1.52	2.32	0.74	1.77	0.82	0.78	0.49	0.6	0.54
CD61	3.03	1.54	2.16	0.78	1.71	0.73	0.71	0.51	0.56	0.47
CD63	2.98	1.68	2.81	1.34	1.58	0.74	0.94	0.8	0.53	0.44
CD67	2.99	1.88	2.86	1.26	1.83	0.63	0.96	0.67	0.61	0.34
CD69	2.32	1.21	2.06	0.92	1.41	0.7	0.89	0.76	0.61	0.58
CD71	2.98	1.58	2.91	1.45	1.64	0.76	0.98	0.92	0.55	0.48
CD73	2.63	1.45	1.76	0.89	1.55	0.68	0.67	0.61	0.59	0.47
CD77	2.96	1.46	2.38	1.14	1.85	0.95	0.8	0.78	0.62	0.65
CD79	2.95	1.5	2.82	1.37	2.15	0.93	0.96	0.91	0.73	0.62
CD81	3.02	1.5	3.06	1.52	1.65	0.72	1.01	1.01	0.55	0.48

Appendix A-4d (Continued):

Weather grid	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	2.97	1.57	3.1	1.52	1.58	0.78	1.04	0.97	0.53	0.5
CD85	2.96	1.53	2.77	1.2	1.6	0.71	0.94	0.79	0.54	0.46
CE11	2.17	1.17	2.37	1.25	1.6	0.61	1.09	1.07	0.73	0.52
CE21	2.41	1.28	2.23	0.89	2	0.59	0.93	0.69	0.83	0.46
CE31	2.61	1.56	1.88	0.7	1.63	0.7	0.72	0.45	0.62	0.45
CE41	2.75	1.57	2.68	1.45	1.78	0.75	0.98	0.93	0.65	0.48
CE51	2.77	1.8	2.39	1.15	2.1	1.05	0.86	0.64	0.76	0.58
CE61	2.93	1.76	2.89	1.41	1.77	0.64	0.99	0.8	0.6	0.36
CE71	2.8	1.7	2.67	1.54	2.2	1.11	0.95	0.91	0.78	0.65
DB15	2.12	1.1	2.45	0.93	1.64	0.72	1.15	0.85	0.78	0.65
DB17	2.09	0.7	2.25	0.72	1.62	0.75	1.08	1.04	0.77	1.08
DB19	2.24	0.88	2.33	1.02	1.66	0.8	1.04	1.16	0.74	0.91
DB25	2.66	1.42	2.97	1.66	2.25	0.69	1.11	1.17	0.84	0.49
DB27	2.75	1.36	2.8	1.39	2.33	0.94	1.02	1.02	0.85	0.69
DB29	2.81	1.52	2.24	1.15	2.14	0.76	0.8	0.76	0.76	0.5
DC11	2.37	1.21	2.85	1.58	2.03	1.21	1.2	1.31	0.86	1
DC13	2.62	1.15	2.88	1.33	2.11	0.99	1.1	1.16	0.81	0.86
DC21	2.71	1.45	2.77	1.29	2.07	0.96	1.02	0.89	0.76	0.66
DC23	2.54	1.3	2.93	1.5	2.05	0.96	1.15	1.15	0.81	0.74
DC31	2.48	1.06	2.76	1.19	2.02	0.86	1.11	1.13	0.81	0.81
DC33	2.72	1.44	2.66	1.35	2.28	0.97	0.98	0.94	0.84	0.67
DC71	2.12	1.05	1.82	0.95	2.25	1.18	0.86	0.9	1.06	1.13
DC73	1.87	1.14	1.85	0.87	1.46	0.68	0.99	0.76	0.78	0.6
DC75	2.54	1.31	2.69	1.27	2.01	1.12	1.06	0.97	0.79	0.85

Appendix A-4e: Annual winter wheat residue (t/ha) from winter wheat-fallow averaged by weather grids in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Weather grid	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
BC49	1.39	1.03	1.31	1.13	2.25	1.13	0.94	1.1	1.62	1.1
BC59	1.86	1.65	1.25	1.06	2.32	1.4	0.67	0.64	1.25	0.85
BC69	1.96	1.74	1.71	1.02	2.17	1.01	0.87	0.59	1.11	0.58
BC79	2.02	1.82	1.2	0.98	1.35	1.14	0.59	0.54	0.67	0.63
BC89	1.24	1.4	1.4	1.15	1.52	1.28	1.12	0.82	1.22	0.91
BC99	0.95	0.86	2.61	0.86	2.75	1.73	2.74	1.01	2.89	2.02
BD31	2.43	1.01	1.42	0.99	1.9	1.06	0.58	0.98	0.78	1.04
BD33	1.27	1.08	1.77	1.14	1.68	1.19	1.39	1.06	1.32	1.1
BD35	1.65	0.97	1.89	1.12	1.68	1.14	1.15	1.16	1.02	1.18
BD37	3.07	1	1.91	1.16	1.88	1.23	0.62	1.16	0.61	1.23
BD39	2.12	1.04	1.77	1.11	1.73	1.19	0.83	1.07	0.81	1.14
BD41	1.24	1.11	1.38	1.01	1.89	1.14	1.12	0.91	1.53	1.02
BD43	2.05	0.92	1.92	1.19	1.9	1.17	0.94	1.29	0.93	1.26
BD45	2.28	0.97	1.72	1.03	1.75	1.12	0.75	1.07	0.77	1.16
BD47	3.22	0.98	1.8	1.11	1.66	1.18	0.56	1.13	0.52	1.2
BD49	2.24	1.03	1.8	1.1	1.9	1.23	0.8	1.07	0.85	1.19
BD51	1.33	1.19	1.38	1.04	1.45	1.17	1.04	0.88	1.09	0.98
BD53	2.55	0.94	1.74	1.05	1.61	1.08	0.68	1.12	0.63	1.15
BD55	3.39	1	1.76	1.11	1.73	1.2	0.52	1.11	0.51	1.2
BD57	3.05	1.97	1.49	0.92	2.06	0.97	0.49	0.47	0.68	0.49
BD59	2.21	1.02	1.79	1.1	1.74	1.18	0.81	1.08	0.78	1.15
BD61	1.31	1.18	1.4	1.06	1.46	1.17	1.07	0.9	1.11	0.99
BD63	2.46	0.96	1.53	1.01	1.63	1.07	0.62	1.05	0.66	1.11
BD65	1.21	1.07	1.74	1.14	1.55	1.18	1.43	1.07	1.28	1.11
BD67	2.27	1.09	1.44	0.99	1.53	1.07	0.63	0.91	0.67	0.98
BD69	2.2	1.07	1.75	1.1	1.59	1.17	0.8	1.03	0.73	1.1
BD71	2.56	1.9	1.87	1.29	1.79	1.41	0.73	0.68	0.7	0.74
BD73	1.86	1.59	1.32	0.97	1.95	1.06	0.71	0.61	1.05	0.67
BD75	2.26	1.08	1.47	1.04	1.5	1.17	0.65	0.96	0.66	1.08
BD77	1.17	1.05	1.32	0.86	1.97	0.97	1.13	0.82	1.69	0.93
BD79	1.24	1.14	1.47	1.1	1.53	1.22	1.19	0.97	1.23	1.07
BD81	2.38	1.97	1.67	1.33	1.68	1.37	0.7	0.68	0.71	0.69
BD83	2.11	1.09	1.35	1.08	1.47	1.24	0.64	1	0.7	1.14
BD85	1.67	1.39	1.63	1.23	1.61	1.33	0.97	0.89	0.96	0.96
BD87	1.25	1.14	3.64	0.96	3.08	1.08	2.91	0.84	2.46	0.95
BD89	1.33	1.21	3.82	0.95	3.03	1.27	2.88	0.79	2.28	1.05
BD91	1.36	1.23	1.39	1.12	1.47	1.24	1.02	0.91	1.08	1.01
BD93	1.65	1.5	1.61	1.29	1.69	1.41	0.98	0.86	1.02	0.94
BD95	1.51	1.38	1.49	1.2	1.61	1.32	0.98	0.87	1.06	0.96
BD97	1.37	1.24	1.32	1.07	1.41	1.17	0.96	0.86	1.03	0.94
BD99	1.24	1.12	3.33	0.94	2.79	1.98	2.69	0.84	2.26	1.77
BE31	1.35	1.22	1.67	1.12	1.65	1.26	1.24	0.92	1.22	1.03
BE41	1.2	1.11	1.57	1.08	1.55	1.18	1.31	0.98	1.29	1.07
BE51	2.29	1.02	1.82	1.11	1.81	1.17	0.79	1.09	0.79	1.15
BE61	1.26	1.16	1.53	1.08	1.77	1.28	1.22	0.93	1.41	1.1
BE71	1.29	1.19	1.55	1.11	1.51	1.2	1.2	0.93	1.17	1.01
BE81	1.36	1.23	1.34	1.07	1.46	1.2	0.99	0.87	1.08	0.98
BE91	1.24	1.1	3.28	0.92	1.26	1.03	2.64	0.83	1.02	0.93
CB77	1.07	0.96	2.48	1.35	2.92	1.26	2.31	1.41	2.73	1.31
CB79	1.09	0.97	1.58	1.52	1.61	0.96	1.44	1.57	1.47	0.99
CB87	1.51	1.36	1.53	1.29	1.6	1.38	1.01	0.95	1.06	1.01
CB89	1.53	1.38	1.53	1.32	1.6	1.4	1	0.95	1.05	1.01
CB97	1.5	1.35	1.52	1.31	1.59	1.4	1.02	0.97	1.06	1.03
CB99	1.49	1.34	1.55	1.33	1.9	1.66	1.04	0.99	1.27	1.24
CC17	2.27	2.05	2.24	1.44	2.24	1.53	0.99	0.7	0.99	0.75

Appendix A-4e (Continued):

Weather grid	BL		SN_i		SN_{φ}		SN_i/BL		SN_{φ}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CC19	1.77	0.9	2.07	1.16	2.08	0.99	1.17	1.29	1.17	1.11
CC25	2.28	2.06	2.36	2.05	2.5	1.93	1.04	1	1.1	0.94
CC27	0.98	0.88	2.35	1.74	2.07	2.36	2.41	1.98	2.12	2.68
CC29	2.22	1.48	1.19	0.95	1.26	1.06	0.53	0.64	0.57	0.72
CC35	2	1.11	2.14	1.17	2.81	2.51	1.07	1.05	1.4	2.26
CC37	1.12	1	2.54	1.2	1.95	1.35	2.27	1.2	1.75	1.35
CC39	1.44	1.03	1.17	0.95	1.27	1.08	0.81	0.92	0.88	1.05
CC43	1.12	1.22	2.4	0.9	2.65	1.02	2.15	0.74	2.37	0.84
CC45	1.16	1.27	2.73	1.15	2.25	1.9	2.35	0.91	1.94	1.5
CC47	1.23	1.08	2.48	0.94	2.23	1.88	2.01	0.87	1.81	1.74
CC49	1.16	1.03	1.11	0.91	1.22	1.04	0.96	0.88	1.05	1.01
CC53	1.16	1.26	1.85	0.9	2.3	1.55	1.59	0.71	1.98	1.22
CC55	1.75	1	2.63	1.41	2.69	1.93	1.5	1.41	1.54	1.93
CC57	1.19	0.99	2.47	1.66	2.41	2.01	2.07	1.67	2.02	2.03
CC59	1.18	1.06	1.56	0.93	2.65	1.02	1.32	0.87	2.24	0.96
CC65	1.14	0.96	2.01	1.29	2.76	2.21	1.76	1.34	2.42	2.31
CC67	1.24	1.09	1.86	1.68	2.52	1.73	1.5	1.54	2.03	1.59
CC69	1.24	1.09	2.36	0.91	2.42	1.42	1.9	0.84	1.95	1.3
CC77	1.39	0.79	2.31	1.5	2.37	1.9	1.66	1.9	1.71	2.41
CC79	1.21	1.01	1.96	1.21	2.07	2	1.63	1.2	1.71	1.98
CC87	1.69	0.84	2.41	1.55	3.19	1.87	1.43	1.86	1.89	2.23
CC89	1.53	0.97	2.13	1.27	2.62	2.1	1.39	1.3	1.71	2.16
CC97	1.16	1.04	1.03	1.65	2.01	1.49	0.89	1.59	1.73	1.44
CD11	1.51	1.37	1.69	1.15	1.55	1.28	1.12	0.84	1.02	0.94
CD13	1.51	1.34	1.74	1.22	2.19	1.24	1.15	0.91	1.45	0.93
CD15	1.36	1.22	1.29	1.03	1.37	1.14	0.95	0.84	1.01	0.93
CD17	1.42	1.27	1.29	1.05	1.37	1.15	0.91	0.82	0.97	0.9
CD19	1.53	1.35	1.41	1.13	1.51	1.25	0.92	0.84	0.99	0.92
CD21	1.24	1.1	1.43	0.94	2.65	1.08	1.15	0.85	2.13	0.98
CD23	1.52	1.35	1.64	1.13	1.48	1.23	1.08	0.83	0.97	0.91
CD25	1.5	1.35	1.68	1.18	1.49	1.26	1.12	0.87	0.99	0.93
CD27	1.69	1.53	1.61	1.34	1.73	1.48	0.95	0.88	1.03	0.97
CD29	1.36	1.22	1.33	1.06	1.44	1.18	0.98	0.87	1.06	0.97
CD31	1.22	1.11	1.44	0.98	1.53	1.41	1.18	0.88	1.25	1.27
CD33	2.09	1.89	1.88	1.58	1.92	1.66	0.9	0.83	0.92	0.88
CD35	1.42	1.27	1.54	1.12	1.76	1.19	1.08	0.88	1.24	0.94
CD37	1.47	1.32	2.19	1.19	1.91	1.29	1.49	0.9	1.3	0.98
CD39	1.64	1.48	3.12	1.37	2.33	1.51	1.9	0.93	1.42	1.02
CD41	1.55	1.38	1.38	1.12	1.47	1.24	0.89	0.81	0.95	0.9
CD43	1.23	1.1	1.12	0.93	2.43	1	0.91	0.85	1.97	0.91
CD45	2.09	1.89	1.91	1.65	1.97	1.77	0.92	0.87	0.94	0.93
CD47	1.5	1.33	1.34	1.12	1.44	1.22	0.89	0.84	0.96	0.92
CD49	1.66	1.49	2.71	1.38	2.18	1.51	1.63	0.92	1.32	1.02
CD51	1.18	1.06	1.44	0.92	1.67	1.02	1.22	0.87	1.42	0.96
CD53	1.68	1.51	1.8	1.38	2.03	1.51	1.07	0.92	1.21	1
CD55	2.09	1.89	1.94	1.68	1.98	1.74	0.93	0.89	0.95	0.92
CD57	1.68	1.49	1.66	1.43	1.74	1.55	0.99	0.96	1.04	1.04
CD59	1.68	1.5	2.28	1.45	1.77	1.57	1.36	0.96	1.06	1.05
CD61	1.47	1.3	2.15	1.14	2.57	1.62	1.46	0.87	1.74	1.24
CD63	1.21	1.08	3.16	1.29	2.55	1.7	2.62	1.19	2.11	1.58
CD67	1.21	1.07	2.06	1.86	1.71	1.76	1.7	1.74	1.41	1.65
CD69	1.21	1.07	1.91	0.91	1.98	1.63	1.58	0.85	1.64	1.53
CD71	1.21	1.07	2.17	1.17	2.11	1.92	1.79	1.09	1.74	1.79
CD73	1.14	1.02	2.7	1.09	1.57	1.35	2.38	1.07	1.38	1.32
CD77	1.18	1.03	2.44	0.91	2.85	1.9	2.07	0.88	2.42	1.84
CD79	1.22	1.07	2.37	1.4	2.24	1.43	1.95	1.31	1.84	1.34
CD81	1.26	0.93	2.83	1.36	2.08	1.94	2.24	1.47	1.65	2.1

Appendix A-4e (Continued):

Weather grid	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
CD83	1.21	1.07	2.72	1.7	2.54	1.75	2.25	1.59	2.1	1.64
CD85	1.18	1.05	1.8	2.23	2.1	1.44	1.52	2.13	1.78	1.38
CE11	1.22	1.11	1.51	0.97	1.34	1.11	1.24	0.87	1.1	1
CE21	1.19	1.07	1.71	0.93	2.45	1.04	1.44	0.87	2.06	0.97
CE31	1.62	1.45	2.07	1.34	1.75	1.49	1.28	0.92	1.08	1.02
CE41	1.65	1.48	2	1.37	1.72	1.51	1.21	0.92	1.04	1.02
CE51	1.23	1.09	2.57	0.97	2.94	1.78	2.09	0.88	2.39	1.63
CE61	1.24	1.1	3.52	1.86	2.31	1.59	2.83	1.69	1.86	1.44
CE71	1.23	1.08	2.79	1.64	2.38	1.42	2.26	1.52	1.93	1.31
DB15	1.18	1.07	1.72	1.37	1.98	1.04	1.45	1.28	1.67	0.97
DB17	1.16	1.04	2.06	1.39	1.73	1.59	1.78	1.34	1.49	1.53
DB19	1.55	1.4	1.8	1.35	1.63	1.44	1.16	0.96	1.05	1.03
DB25	1.4	1.08	1.3	1.17	1.42	1.27	0.93	1.08	1.01	1.18
DB27	1.38	1.21	1.44	1.29	1.51	1.35	1.05	1.07	1.09	1.12
DB29	1.4	1.23	2.06	1.48	1.75	1.56	1.47	1.21	1.25	1.27
DC11	1.15	1.03	2.51	1.33	1.55	1.34	2.18	1.29	1.34	1.3
DC13	1.4	1.24	1.91	1.51	1.77	1.91	1.36	1.21	1.26	1.53
DC21	1.43	1.25	1.31	1.45	1.74	1.26	0.92	1.15	1.22	1.01
DC23	1.72	1.54	1.74	1.59	2.24	2	1.01	1.03	1.3	1.3
DC31	1.52	1.35	1.51	1.37	1.82	1.5	1	1.01	1.2	1.11
DC33	1.72	1.52	1.75	1.6	1.85	1.97	1.02	1.05	1.08	1.29
DC71	1.13	0.7	1.16	1.05	1.22	1.09	1.03	1.5	1.08	1.56
DC73	0.87	0.68	1.45	1.3	1.81	1.07	1.67	1.92	2.08	1.58
DC75	1.11	0.94	1.19	1.08	1.26	1.13	1.07	1.15	1.13	1.21

APPENDIX B

EPIC model outputs by Alberta Regional Municipalities

Appendix B-1a: Annual wind erosion (t/ha) from continuous wheat averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Regional Municipalities	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	0.11	0.11	0.1	0.12	0.08	0.1	0.94	1.08	0.73	0.93
Improvement District 22	0.22	0.22	0.21	0.25	0.17	0.21	0.96	1.13	0.76	0.95
Improvement District 18	0.45	0.49	0.63	0.54	0.35	0.4	1.41	1.09	0.78	0.82
Improvement District 17	0.37	0.42	0.45	0.47	0.3	0.38	1.2	1.12	0.8	0.9
Improvement District 21	0.38	0.4	0.3	0.36	0.29	0.37	0.8	0.88	0.78	0.91
Improvement District 20	0.95	1.16	0.78	0.85	0.7	0.91	0.82	0.74	0.74	0.79
Fairview	0.53	0.57	0.35	0.41	0.36	0.46	0.67	0.72	0.68	0.81
Peace	0.38	0.4	0.31	0.35	0.27	0.34	0.82	0.88	0.7	0.85
Spirit River	0.89	1.03	0.61	0.68	0.56	0.74	0.69	0.66	0.63	0.72
Improvement District 19	0.95	1.09	0.69	0.75	0.61	0.8	0.73	0.69	0.64	0.74
Smoky River	0.61	0.68	0.51	0.57	0.43	0.56	0.85	0.84	0.7	0.83
County 1 Grande Prairie	2.39	2.85	1.91	1.91	1.53	1.8	0.8	0.67	0.64	0.63
Improvement District 16	1.38	1.61	1.19	1.18	0.96	1.14	0.86	0.73	0.7	0.7
Improvement District 15	0.13	0.15	0.18	0.21	0.16	0.2	1.46	1.43	1.29	1.39
County 12 Athabasca	0.59	0.65	1.02	0.77	0.58	0.65	1.73	1.19	0.99	0.99
County 11 Barrhead	0.36	0.4	0.35	0.41	0.4	0.49	0.98	1.01	1.11	1.21
Westlock	0.57	0.61	0.65	0.61	0.52	0.64	1.15	0.99	0.92	1.05
County 7 Thorhild	0.86	0.93	0.97	0.85	0.61	0.74	1.14	0.91	0.71	0.79
County 13 Smoky Lake	0.77	0.82	0.84	0.64	0.46	0.55	1.1	0.78	0.61	0.67
County 19 St. Paul	0.82	0.87	0.8	0.64	0.47	0.52	0.98	0.73	0.57	0.6
Bonnyville	1.24	1.33	1.05	0.87	0.65	0.73	0.84	0.65	0.52	0.55
County 21 Two Hills	1.15	1.19	1.11	0.73	0.53	0.58	0.97	0.61	0.46	0.49
County 24 Vermilion River	0.48	0.52	0.44	0.43	0.35	0.41	0.91	0.83	0.73	0.8
County 27 Minburn	0.47	0.5	0.61	0.42	0.29	0.31	1.3	0.85	0.62	0.62
County 9 Beaver	0.45	0.48	0.52	0.43	0.31	0.37	1.15	0.89	0.69	0.77
County 30 Lamont	0.66	0.69	0.66	0.62	0.44	0.53	1	0.9	0.67	0.77
Improvement District 13	0.84	0.87	0.8	0.87	0.57	0.72	0.96	1	0.68	0.82
County 20 Strathcona	1.06	1.12	0.98	1.17	0.73	0.94	0.93	1.05	0.69	0.84
Sturgeon	1.37	1.4	1.24	1.56	0.99	1.3	0.91	1.12	0.72	0.93
County 28 Lac Ste. Anne	0.27	0.3	0.2	0.25	0.25	0.31	0.74	0.84	0.92	1.03
County 31 Parkland	0.38	0.42	0.21	0.27	0.24	0.31	0.57	0.65	0.63	0.73
Improvement District 14	0.21	0.25	0.19	0.18	0.15	0.18	0.89	0.74	0.71	0.72
Clearwater	0.1	0.11	0.08	0.11	0.08	0.1	0.88	1	0.86	0.95
Brazeau	0.12	0.14	0.08	0.1	0.09	0.11	0.66	0.73	0.71	0.79
County 25 Leduc	0.43	0.49	0.28	0.34	0.32	0.39	0.65	0.69	0.75	0.8
County 10 Wetaskiwin	0.33	0.36	0.21	0.26	0.33	0.38	0.63	0.72	1.01	1.03
County 22 Camrose	0.44	0.47	0.33	0.37	0.36	0.42	0.76	0.8	0.83	0.91
County 3 Ponoka	0.33	0.36	0.23	0.29	0.3	0.34	0.71	0.8	0.91	0.94
County 29 Flagstaff	0.77	0.94	0.91	0.94	1.06	1.2	1.17	1	1.38	1.27
Wainwright	1.02	1.19	1.03	1.09	0.88	1.02	1.01	0.92	0.87	0.85
Provost	2.93	3.44	4.19	4.48	3.41	3.94	1.43	1.3	1.16	1.14
Special Area 4	3.74	4.65	6.21	7.04	5.82	6.58	1.66	1.51	1.56	1.41
Special Area 3	3.55	4.25	5.06	6.29	5.05	5.8	1.42	1.48	1.42	1.36
County 18 Paintearth	1.51	1.91	2.26	2.67	2.61	2.83	1.5	1.4	1.73	1.49
County 16 Stettler	0.96	1.19	1.2	1.34	1.32	1.51	1.26	1.13	1.38	1.27
County 14 Lacombe	0.65	0.73	0.61	0.77	0.51	0.58	0.94	1.06	0.79	0.8
County 17 Mountain View	1.12	1.23	0.91	1.1	0.67	0.73	0.82	0.89	0.6	0.59
Kneehill	2.22	2.52	2.04	2.53	1.81	1.85	0.92	1	0.82	0.73
Starland	2.03	2.36	2.71	2.85	2.12	2.63	1.34	1.21	1.05	1.11
Special Area 2	4.19	5.11	5.05	6.09	4.62	5.45	1.21	1.19	1.1	1.07
Acadia Valley	3.82	4.34	4.44	5.87	4.33	5.08	1.16	1.35	1.14	1.17
County 16 Wheatland	5.84	6.83	4.15	5.19	4.15	4.73	0.71	0.76	0.71	0.69
Rocky View	2.78	3.21	1.97	2.44	1.87	2.13	0.71	0.76	0.67	0.66
Bighorn	0.94	1.09	0.81	1.14	0.85	1.07	0.86	1.05	0.91	0.98
Improvement District 8	0.83	0.96	0.71	0.97	0.71	0.89	0.85	1.01	0.85	0.93

Appendix B-1a (Continued):

Regional Municipalities	BL		SN_i		SN_{φ}		SN_i/BL		SN_{φ}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	1.55	1.88	1.49	2.09	1.4	1.99	0.96	1.11	0.9	1.06
Foothill	3.62	4.4	2.18	2.95	2.35	2.98	0.6	0.67	0.65	0.68
County 2 Vulcan	10.49	12.37	5.82	8.42	6.41	8.4	0.55	0.68	0.61	0.68
County 4 Newell	7.8	9.21	6.14	7.89	5.71	6.91	0.79	0.86	0.73	0.75
Cypress	5.8	6.69	4.75	6.18	3.86	5.04	0.82	0.92	0.67	0.75
Suffield	6.32	7.18	5.52	7.23	4.66	5.7	0.87	1.01	0.74	0.79
County 8 Forty Mile	7.91	9.19	5.16	6.91	3.98	5.45	0.65	0.75	0.5	0.59
County 5 Warner	14.35	17.79	9.64	13.47	7.67	10.83	0.67	0.76	0.53	0.61
Taber	13.19	16.27	8.08	11.96	7.77	10.95	0.61	0.74	0.59	0.67
County 26 Lethbridge	21.09	26.04	12.55	19.21	10.84	16.71	0.6	0.74	0.51	0.64
Cardston	13.92	17.07	10.12	14.35	7.45	11.08	0.73	0.84	0.53	0.65
Willow Creek	12.68	15.53	7.77	12.47	6.3	9.95	0.61	0.8	0.5	0.64
Pincher Creek	8.39	10.1	6.84	9.52	4.19	6.48	0.82	0.94	0.5	0.64
Improvement District 6	4.69	5.85	4.04	5.64	2.7	4.21	0.86	0.96	0.58	0.72
Cold Lake Air Weapons Range	0.82	0.89	1.13	0.93	0.63	0.71	1.38	1.05	0.77	0.8
CFB Wainwright	1.13	1.37	1.36	1.48	1.24	1.47	1.2	1.08	1.1	1.07

Appendix B-1b: Annual wind erosion (t/ha) from wheat-fallow averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Regional Municipalities	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	0.07	0.13	0.07	0.2	0.06	0.14	1.04	1.46	0.83	1.02
Improvement District 22	0.14	0.26	0.15	0.39	0.13	0.27	1.09	1.5	0.91	1.05
Improvement District 18	0.3	0.79	0.5	1.1	0.25	0.8	1.65	1.39	0.83	1.01
Improvement District 17	0.26	0.66	0.34	0.9	0.23	0.66	1.32	1.36	0.91	0.99
Improvement District 21	0.25	0.5	0.22	0.55	0.21	0.44	0.85	1.11	0.84	0.87
Improvement District 20	0.67	1.59	0.55	1.26	0.5	1.08	0.82	0.79	0.74	0.68
Fairview	0.33	0.71	0.26	0.65	0.27	0.56	0.79	0.92	0.82	0.79
Peace	0.23	0.44	0.22	0.51	0.19	0.41	0.95	1.15	0.85	0.93
Spirit River	0.59	1.35	0.45	1.07	0.43	0.94	0.77	0.79	0.73	0.7
Improvement District 19	0.6	1.29	0.48	1.1	0.45	0.97	0.8	0.85	0.75	0.75
Smoky River	0.4	0.83	0.35	0.8	0.3	0.69	0.86	0.96	0.75	0.83
County 1 Grande Prairie	1.58	3.69	1.38	2.69	1.09	2.31	0.87	0.73	0.69	0.63
Improvement District 16	0.92	2	0.9	1.66	0.66	1.44	0.98	0.83	0.72	0.72
Improvement District 15	0.11	0.27	0.14	0.37	0.12	0.29	1.25	1.34	1.06	1.07
County 12 Athabasca	0.36	1.05	0.86	1.56	0.46	1.25	2.38	1.49	1.25	1.19
County 11 Barrhead	0.23	0.67	0.28	0.74	0.29	0.63	1.21	1.1	1.25	0.93
Westlock	0.35	1.13	0.53	1.4	0.39	1.11	1.52	1.24	1.13	0.98
County 7 Thorhild	0.51	1.71	0.78	1.96	0.48	1.44	1.55	1.14	0.95	0.84
County 13 Smoky Lake	0.56	1.3	0.67	1.31	0.38	0.98	1.19	1.01	0.68	0.76
County 19 St. Paul	0.63	1.25	0.63	1.17	0.34	0.85	1	0.94	0.54	0.68
Bonnyville	0.98	1.95	0.86	1.8	0.45	1.41	0.88	0.92	0.46	0.72
County 21 Two Hills	0.94	1.56	0.99	1.41	0.44	1.02	1.06	0.91	0.47	0.66
County 24 Vermilion River	0.3	0.81	0.29	0.78	0.26	0.68	0.98	0.96	0.85	0.84
County 27 Minburn	0.35	0.76	0.49	0.83	0.22	0.59	1.38	1.09	0.62	0.77
County 9 Beaver	0.33	0.81	0.39	0.81	0.22	0.65	1.18	1	0.68	0.8
County 30 Lamont	0.44	1.26	0.5	1.26	0.4	0.96	1.13	1	0.91	0.76
Improvement District 13	0.52	1.76	0.57	1.69	0.46	1.3	1.09	0.96	0.88	0.74
County 20 Strathcona	0.64	2.33	0.65	2.19	0.55	1.7	1.02	0.94	0.86	0.73
Sturgeon	0.77	3.15	0.86	3.08	0.76	2.45	1.12	0.98	0.99	0.78
County 28 Lac Ste. Anne	0.17	0.47	0.15	0.5	0.18	0.44	0.86	1.06	1.07	0.94
County 31 Parkland	0.22	0.56	0.15	0.48	0.17	0.43	0.68	0.85	0.81	0.76
Improvement District 14	0.14	0.31	0.14	0.26	0.1	0.22	1	0.84	0.73	0.73
Clearwater	0.07	0.15	0.06	0.15	0.05	0.12	0.91	0.99	0.73	0.79
Brazeau	0.07	0.17	0.06	0.14	0.06	0.13	0.81	0.82	0.81	0.76
County 25 Leduc	0.27	0.73	0.17	0.6	0.22	0.5	0.63	0.82	0.79	0.69
County 10 Wetaskiwin	0.22	0.57	0.16	0.44	0.21	0.41	0.73	0.78	0.99	0.72
County 22 Camrose	0.3	0.78	0.24	0.69	0.24	0.56	0.79	0.89	0.8	0.72
County 3 Ponoka	0.23	0.55	0.21	0.48	0.19	0.39	0.9	0.87	0.81	0.71
County 29 Flagstaff	0.53	1.76	0.61	1.78	0.7	1.67	1.15	1.01	1.32	0.95
Wainwright	0.6	1.95	0.65	2.02	0.59	1.62	1.08	1.03	0.97	0.83
Provost	1.95	6.11	2.88	7.49	2.28	6.06	1.48	1.23	1.17	0.99
Special Area 4	2.57	9.13	4.08	11.79	3.56	9.88	1.59	1.29	1.39	1.08
Special Area 3	2.49	8.46	3.47	10.81	3.02	8.81	1.39	1.28	1.21	1.04
County 18 Paintearth	0.96	4.05	1.6	4.66	1.64	4.03	1.68	1.15	1.72	0.99
County 16 Stettler	0.71	2.46	0.82	2.53	0.84	2.22	1.16	1.03	1.18	0.9
County 14 Lacombe	0.49	1.14	0.61	1.16	0.33	0.8	1.25	1.02	0.68	0.71
County 17 Mountain View	0.8	1.68	0.82	1.72	0.44	1.21	1.03	1.02	0.55	0.72
Kneehill	1.54	3.92	1.73	4.07	1.1	3.04	1.12	1.04	0.72	0.77
Starland	1.43	4.61	1.96	5.02	1.4	4.01	1.37	1.09	0.98	0.87
Special Area 2	3.1	7.23	3.56	10.76	3.11	8.67	1.15	1.49	1	1.2
Acadia Valley	2.77	8.74	3.26	10.32	2.54	8.14	1.18	1.18	0.92	0.93
County 16 Wheatland	3.86	10.25	2.92	10.34	2.56	8.22	0.75	1.01	0.66	0.8
Rocky View	1.8	4.68	1.36	4.58	1.17	3.64	0.75	0.98	0.65	0.78
Bighorn	0.65	1.77	0.52	1.81	0.52	1.47	0.79	1.03	0.8	0.83
Improvement District 8	0.57	1.5	0.46	1.53	0.44	1.23	0.82	1.02	0.77	0.82

Appendix B-1b (Continued):

Regional Municipalities	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	0.9	3.04	0.9	3.27	0.83	2.43	0.99	1.08	0.92	0.8
Foothill	2.17	6.98	1.46	6.69	1.53	5.28	0.67	0.96	0.71	0.76
County 2 Vulcan	6.68	20.45	4.03	20.92	4.23	16.19	0.6	1.02	0.63	0.79
County 4 Newell	5.65	12.84	4.48	15.53	3.95	12.08	0.79	1.21	0.7	0.94
Cypress	4.05	11.66	3.45	12.87	2.44	9.57	0.85	1.1	0.6	0.82
Suffield	4.59	12.45	4.11	13.99	2.92	10.18	0.9	1.12	0.64	0.82
County 8 Forty Mile	5.43	15.26	3.85	16.09	2.64	11.44	0.71	1.05	0.49	0.75
County 5 Warner	9.85	29.52	6.99	31.79	5.55	22.12	0.71	1.08	0.56	0.75
Taber	8.54	27.32	5.34	28.39	5.31	21.28	0.63	1.04	0.62	0.78
County 26 Lethbridge	13.26	42.6	8.73	45.6	8.13	32.81	0.66	1.07	0.61	0.77
Cardston	9.61	29.01	7.67	31.74	6.19	22.52	0.8	1.09	0.64	0.78
Willow Creek	8.36	26.07	5.75	28.63	5.08	19.93	0.69	1.1	0.61	0.76
Pincher Creek	6.14	17.64	5.55	20.18	3.55	12.78	0.9	1.14	0.58	0.72
Improvement District 6	3.29	10.6	3.15	12.23	2.15	7.83	0.96	1.15	0.65	0.74
Cold Lake Air Weapons Range	0.57	1.55	0.9	2.05	0.44	1.53	1.59	1.32	0.78	0.99
CFB Wainwright	0.71	2.45	0.9	2.56	0.86	2.28	1.26	1.04	1.21	0.93

Appendix B-1c: Annual wind erosion (t/ha) from canola-wheat-fallow averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Regional Municipalities	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	0.09	0.13	0.12	0.2	0.11	0.21	1.35	1.63	1.3	1.7
Improvement District 22	0.18	0.25	0.25	0.42	0.23	0.42	1.38	1.67	1.31	1.66
Improvement District 18	0.3	0.62	0.58	0.98	0.41	0.99	1.96	1.57	1.38	1.58
Improvement District 17	0.3	0.54	0.44	0.79	0.36	0.83	1.44	1.46	1.18	1.54
Improvement District 21	0.28	0.46	0.31	0.57	0.37	0.65	1.11	1.25	1.32	1.42
Improvement District 20	0.81	1.52	0.77	1.39	0.94	1.62	0.95	0.91	1.16	1.06
Fairview	0.38	0.67	0.37	0.71	0.44	0.84	0.98	1.06	1.18	1.26
Peace	0.28	0.45	0.29	0.53	0.33	0.62	1.04	1.18	1.19	1.38
Spirit River	0.71	1.35	0.64	1.25	0.76	1.47	0.9	0.93	1.07	1.09
Improvement District 19	0.71	1.35	0.6	1.23	0.75	1.54	0.83	0.91	1.05	1.14
Smoky River	0.45	0.81	0.46	0.87	0.51	1.06	1.02	1.08	1.13	1.31
County 1 Grande Prairie 2	3.79	1.81	3.3	1.94	3.8	0.9	0.87	0.97	1	
Improvement District 16	1.12	2	1.07	1.84	0.92	1.93	0.95	0.92	0.82	0.96
Improvement District 15	0.12	0.2	0.17	0.31	0.17	0.35	1.45	1.54	1.42	1.76
County 12 Athabasca	0.37	0.76	1.11	1.56	0.71	1.47	3.02	2.07	1.94	1.95
County 11 Barrhead	0.23	0.49	0.37	0.72	0.4	0.92	1.6	1.49	1.75	1.89
Westlock	0.34	0.77	0.71	1.39	0.62	1.54	2.06	1.81	1.8	2
County 7 Thorhild	0.49	1.11	1.11	2.07	0.84	1.99	2.24	1.88	1.7	1.8
County 13 Smoky Lake	0.48	0.97	0.89	1.54	0.64	1.41	1.84	1.59	1.32	1.46
County 19 St. Paul	0.63	1.13	0.79	1.29	0.65	1.23	1.25	1.13	1.03	1.08
Bonnyville	1.07	1.69	1.02	1.76	0.88	1.76	0.95	1.04	0.82	1.04
County 21 Two Hills	0.72	1.31	1.22	1.73	0.75	1.4	1.69	1.32	1.04	1.07
County 24 Vermilion River	0.39	0.79	0.52	0.96	0.53	1.1	1.32	1.21	1.34	1.39
County 27 Minburn	0.34	0.76	0.61	1.06	0.44	0.94	1.81	1.39	1.32	1.24
County 9 Beaver	0.35	0.81	0.49	1.03	0.49	1	1.41	1.26	1.4	1.22
County 30 Lamont	0.48	1.01	0.82	1.72	0.7	1.67	1.71	1.7	1.47	1.66
Improvement District 13	0.58	1.31	1.01	2.21	0.89	2.24	1.73	1.69	1.53	1.71
County 20 Strathcona	0.71	1.65	1.21	2.8	1.13	2.92	1.7	1.7	1.59	1.77
Sturgeon	0.87	2.16	1.74	3.94	1.55	4.16	2	1.83	1.78	1.93
County 28 Lac Ste. Anne	0.16	0.34	0.23	0.53	0.27	0.66	1.4	1.58	1.7	1.96
County 31 Parkland	0.23	0.41	0.25	0.62	0.32	0.74	1.1	1.48	1.39	1.78
Improvement District 14	0.17	0.3	0.17	0.29	0.14	0.29	0.97	0.95	0.8	0.95
Clearwater	0.1	0.15	0.09	0.14	0.07	0.14	0.92	0.97	0.67	0.94
Brazeau	0.09	0.14	0.09	0.19	0.1	0.19	0.98	1.41	1.15	1.4
County 25 Leduc	0.3	0.6	0.28	0.71	0.39	0.86	0.93	1.18	1.33	1.44
County 10 Wetaskiwin	0.27	0.6	0.26	0.53	0.35	0.66	0.96	0.89	1.3	1.11
County 22 Camrose	0.39	0.75	0.42	0.79	0.45	0.89	1.09	1.05	1.16	1.19
County 3 Ponoka	0.25	0.51	0.31	0.51	0.29	0.54	1.2	1	1.14	1.07
County 29 Flagstaff	0.84	1.67	1	1.85	1.4	2.31	1.18	1.1	1.66	1.38
Wainwright	0.99	1.76	1.06	1.96	1.24	2.21	1.07	1.11	1.25	1.26
Provost	3.64	5.71	3.96	6.41	4.13	6.71	1.09	1.12	1.14	1.17
Special Area 4	5.39	8.44	6.11	9.52	6.17	10.79	1.13	1.13	1.14	1.28
Special Area 3	6.19	8.49	6.6	9.51	6	10.01	1.07	1.12	0.97	1.18
County 18 Paintearth	1.75	3.56	2.24	3.81	2.89	4.68	1.28	1.07	1.65	1.31
County 16 Stettler	1.09	2.14	1.55	2.28	1.62	2.69	1.42	1.07	1.49	1.26
County 14 Lacombe	0.6	1.11	0.84	1.16	0.57	1.07	1.41	1.05	0.95	0.96
County 17 Mountain View	1	1.62	1.14	1.69	0.81	1.55	1.15	1.04	0.81	0.95
Kneehill	2.13	3.56	2.7	4.06	2.33	3.91	1.27	1.14	1.09	1.1
Starland	2.41	4.35	3.49	4.85	3.02	4.62	1.45	1.12	1.25	1.06
Special Area 2	6.54	8.95	6.71	9.93	6.09	9.34	1.03	1.11	0.93	1.04
Acadia Valley	7	9.55	7.14	9.88	6.14	10.07	1.02	1.03	0.88	1.05
County 16 Wheatland	5.56	8.67	5.85	9.45	5.2	9.27	1.05	1.09	0.94	1.07
Rocky View	2.45	4.25	2.51	4.41	2.43	4.58	1.02	1.04	0.99	1.08
Bighorn	1.15	1.66	0.87	1.49	0.95	1.9	0.75	0.9	0.83	1.14
Improvement District 8	0.97	1.44	0.76	1.32	0.81	1.6	0.79	0.91	0.83	1.11

Appendix B-1c (Continued):

Regional Municipalities	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	2.06	2.94	1.65	3	1.64	2.94	0.8	1.02	0.79	1
Foothill	3.58	5.97	3.08	5.73	3.45	6.08	0.86	0.96	0.96	1.02
County 2 Vulcan	11.76	16.71	10.18	16.97	10.56	18	0.87	1.02	0.9	1.08
County 4 Newell	10.2	13.6	9.06	13.72	8.07	12.8	0.89	1.01	0.79	0.94
Cypress	9.1	11.46	7.87	12.11	7.2	11.69	0.86	1.06	0.79	1.02
Suffield	9.76	12.37	9.05	13.16	7.93	12.57	0.93	1.06	0.81	1.02
County 8 Forty Mile	11.05	14.49	9.13	14.46	8.52	13.88	0.83	1	0.77	0.96
County 5 Warner	18.19	25.51	15.15	25.32	14.26	24.5	0.83	0.99	0.78	0.96
Taber	16.23	23.11	13.87	22.85	14.24	24.18	0.85	0.99	0.88	1.05
County 26 Lethbridge	23.75	35.2	20.23	34.54	19.59	35.15	0.85	0.98	0.82	1
Cardston	16.89	24	14.63	24.59	13.08	22.35	0.87	1.02	0.77	0.93
Willow Creek	14.78	21.39	12.5	21.62	12.48	20.93	0.85	1.01	0.84	0.98
Pincher Creek	9.99	14.56	9.25	15.35	7.02	12.14	0.93	1.05	0.7	0.83
Improvement District 6	6.1	9.13	5.6	9.72	4.51	7.71	0.92	1.06	0.74	0.84
Cold Lake Air Weapons Range	0.52	1.25	1.01	1.86	0.73	1.89	1.92	1.49	1.39	1.52
CFB Wainwright	1.28	2.23	1.32	2.54	1.77	2.83	1.03	1.14	1.38	1.27

Appendix B-1d: Annual wind erosion (t/ha) from canola-wheat-fallow averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Regional Municipalities	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	0.05	0.04	0.05	0.04	0.04	0.03	1.06	1.05	0.85	0.8
Improvement District 22	0.1	0.07	0.08	0.06	0.07	0.05	0.8	0.86	0.7	0.64
Improvement District 18	0.31	0.26	0.36	0.39	0.12	0.14	1.16	1.54	0.41	0.55
Improvement District 17	0.19	0.22	0.21	0.22	0.11	0.11	1.07	1	0.56	0.49
Improvement District 21	0.19	0.16	0.1	0.09	0.11	0.07	0.52	0.57	0.56	0.45
Improvement District 20	0.67	0.58	0.16	0.18	0.23	0.16	0.24	0.31	0.35	0.28
Fairview	0.26	0.21	0.09	0.09	0.1	0.07	0.36	0.43	0.38	0.32
Peace	0.19	0.14	0.08	0.07	0.08	0.06	0.42	0.48	0.41	0.42
Spirit River	0.49	0.41	0.13	0.13	0.15	0.11	0.26	0.33	0.31	0.26
Improvement District 19	0.5	0.39	0.14	0.14	0.14	0.11	0.29	0.36	0.28	0.28
Smoky River	0.31	0.25	0.15	0.13	0.17	0.08	0.48	0.52	0.55	0.34
County 1 Grande Prairie	1.27	1.04	0.31	0.29	0.31	0.25	0.24	0.28	0.24	0.24
Improvement District 16	0.76	0.64	0.35	0.36	0.15	0.16	0.46	0.56	0.2	0.26
Improvement District 15	0.09	0.1	0.06	0.07	0.03	0.04	0.63	0.7	0.31	0.39
County 12 Athabasca	0.41	0.33	0.67	0.71	0.24	0.25	1.62	2.13	0.58	0.76
County 11 Barrhead	0.29	0.22	0.09	0.13	0.07	0.09	0.32	0.59	0.22	0.39
Westlock	0.37	0.31	0.32	0.36	0.12	0.13	0.85	1.15	0.32	0.42
County 7 Thorhild	0.53	0.44	0.49	0.55	0.16	0.19	0.92	1.25	0.31	0.44
County 13 Smoky Lake	0.42	0.38	0.49	0.51	0.18	0.18	1.16	1.35	0.44	0.48
County 19 St. Paul	0.57	0.52	0.45	0.48	0.18	0.2	0.78	0.92	0.32	0.38
Bonnyville	1.03	0.93	0.59	0.69	0.25	0.3	0.57	0.74	0.24	0.32
County 21 Two Hills	0.34	0.3	0.84	0.84	0.23	0.24	2.48	2.8	0.68	0.79
County 24 Vermilion River	0.38	0.32	0.14	0.15	0.1	0.12	0.38	0.46	0.27	0.36
County 27 Minburn	0.27	0.24	0.36	0.36	0.1	0.12	1.34	1.51	0.37	0.5
County 9 Beaver	0.29	0.24	0.25	0.25	0.07	0.09	0.85	1.04	0.23	0.38
County 30 Lamont	0.38	0.36	0.31	0.31	0.11	0.13	0.81	0.85	0.3	0.35
Improvement District 13	0.53	0.47	0.27	0.28	0.11	0.15	0.52	0.59	0.21	0.31
County 20 Strathcona	0.69	0.59	0.25	0.25	0.12	0.18	0.35	0.42	0.18	0.31
Sturgeon	0.97	0.83	0.3	0.33	0.18	0.23	0.31	0.4	0.19	0.27
County 28 Lac Ste. Anne	0.18	0.14	0.05	0.06	0.04	0.07	0.27	0.43	0.21	0.48
County 31 Parkland	0.17	0.13	0.04	0.05	0.04	0.06	0.27	0.37	0.22	0.45
Improvement District 14	0.12	0.1	0.06	0.06	0.02	0.03	0.5	0.61	0.18	0.26
Clearwater	0.06	0.04	0.03	0.04	0.01	0.01	0.58	0.9	0.09	0.26
Brazeau	0.04	0.03	0.01	0.01	0.01	0.02	0.23	0.56	0.2	0.62
County 25 Leduc	0.21	0.16	0.06	0.05	0.04	0.07	0.26	0.33	0.18	0.44
County 10 Wetaskiwin	0.16	0.12	0.04	0.04	0.03	0.05	0.23	0.31	0.16	0.39
County 22 Camrose	0.25	0.21	0.09	0.09	0.05	0.07	0.36	0.45	0.2	0.33
County 3 Ponoka	0.2	0.17	0.09	0.1	0.02	0.04	0.45	0.6	0.12	0.25
County 29 Flagstaff	0.58	0.48	0.17	0.18	0.12	0.16	0.3	0.39	0.21	0.33
Wainwright	1.01	0.86	0.25	0.29	0.14	0.26	0.25	0.33	0.14	0.31
Provost	3.42	2.96	1.33	1.47	0.57	0.75	0.39	0.5	0.17	0.26
Special Area 4	4.84	4.23	1.29	1.81	0.89	1.06	0.27	0.43	0.18	0.25
Special Area 3	4.21	3.74	1.25	1.62	0.66	0.85	0.3	0.43	0.16	0.23
County 18 Paintearth	1.53	1.38	0.43	0.47	0.35	0.43	0.28	0.34	0.23	0.31
County 16 Stettler	0.81	0.7	0.25	0.27	0.17	0.21	0.31	0.39	0.2	0.3
County 14 Lacombe	0.43	0.39	0.46	0.47	0.05	0.07	1.06	1.2	0.12	0.18
County 17 Mountain View	0.65	0.58	0.63	0.63	0.09	0.12	0.97	1.09	0.14	0.2
Kneehill	1.32	1.35	0.91	0.92	0.19	0.23	0.69	0.68	0.15	0.17
Starland	1.87	1.7	0.8	0.83	0.24	0.3	0.43	0.49	0.13	0.18
Special Area 2	4.22	3.95	1.62	1.88	0.85	1.11	0.38	0.48	0.2	0.28
Acadia Valley	4.21	3.82	1.65	1.8	0.48	0.55	0.39	0.47	0.11	0.14
County 16 Wheatland	2.92	3.07	1.38	1.44	0.51	0.66	0.47	0.47	0.17	0.22
Rocky View	1.21	1.19	0.61	0.63	0.19	0.25	0.5	0.53	0.15	0.21
Bighorn	0.74	0.55	0.18	0.2	0.08	0.12	0.24	0.36	0.11	0.21
Improvement District 8	0.59	0.45	0.18	0.2	0.07	0.1	0.31	0.46	0.11	0.22

Appendix B-1d (Continued):

Regional Municipalities	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	1.04	1.1	0.34	0.47	0.23	0.38	0.32	0.43	0.22	0.34
Foothill	1.61	1.75	0.51	0.59	0.32	0.44	0.32	0.34	0.2	0.25
County 2 Vulcan	3.34	4.88	1.45	1.63	0.97	1.17	0.43	0.33	0.29	0.24
County 4 Newell	4.75	5.11	2.27	2.53	1.19	1.44	0.48	0.5	0.25	0.28
Cypress	4.04	4.19	2.22	2.33	0.47	0.54	0.55	0.56	0.12	0.13
Suffield	4.7	4.93	2.35	2.46	0.95	1.02	0.5	0.5	0.2	0.21
County 8 Forty Mile	3.33	4.29	2.39	2.57	0.39	0.49	0.72	0.6	0.12	0.11
County 5 Warner	5.57	7.82	3.6	4.02	1.47	1.75	0.65	0.51	0.26	0.22
Taber	3.21	5.45	1.77	2.26	1.09	1.38	0.55	0.42	0.34	0.25
County 26 Lethbridge	6.36	10.18	3.59	4.22	2.35	2.84	0.56	0.41	0.37	0.28
Cardston	6.6	8.37	4.15	4.37	2.05	2.42	0.63	0.52	0.31	0.29
Willow Creek	5.8	8.13	3.05	3.2	1.88	2.19	0.53	0.39	0.32	0.27
Pincher Creek	5.67	7.18	3.96	4.25	1.58	2.01	0.7	0.59	0.28	0.28
Improvement District 6	3.44	4.34	2.41	2.67	1.16	1.48	0.7	0.61	0.34	0.34
Cold Lake Air Weapons Range	0.59	0.46	0.63	0.71	0.19	0.24	1.06	1.56	0.32	0.52
CFB Wainwright	1.18	1.02	0.3	0.33	0.22	0.29	0.25	0.33	0.18	0.28

Appendix B-2a: Annual water erosion (t/ha) from continuous wheat averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{lp}, SN_l).

Regional Municipalities	BL		SN_l		SN_{lp}		SN/BL		SN_{lp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	0.22	0.24	0.21	0.23	0.33	0.36	0.97	0.97	1.51	1.51
Improvement District 22	0.3	0.32	0.36	0.38	0.53	0.57	1.19	1.19	1.77	1.77
Improvement District 18	0.74	0.85	0.86	0.91	1.86	2	1.16	1.08	2.51	2.36
Improvement District 17	1.4	1.63	1.27	1.38	2.04	2.27	0.91	0.85	1.46	1.39
Improvement District 21	0.43	0.47	0.69	0.75	0.97	1.06	1.61	1.6	2.27	2.26
Improvement District 20	0.83	0.95	2.21	2.41	2.88	3.19	2.68	2.54	3.49	3.37
Fairview	0.34	0.38	0.54	0.59	0.79	0.85	1.58	1.54	2.3	2.23
Peace	0.29	0.31	0.32	0.34	0.54	0.56	1.09	1.07	1.85	1.77
Spirit River	0.35	0.4	0.81	0.87	1.09	1.19	2.33	2.19	3.15	2.99
Improvement District 19	0.32	0.36	0.4	0.43	0.61	0.65	1.22	1.18	1.89	1.78
Smoky River	0.41	0.46	0.39	0.42	0.64	0.68	0.97	0.91	1.57	1.48
County 1 Grande Prairie	0.49	0.55	0.56	0.6	0.76	0.82	1.14	1.09	1.54	1.49
Improvement District 16	2.44	2.76	1.57	1.7	2.49	2.77	0.65	0.62	1.02	1
Improvement District 15	4.42	5.14	3.89	4.24	6.33	7.05	0.88	0.83	1.43	1.37
County 12 Athabasca	0.49	0.56	0.35	0.37	0.75	0.81	0.71	0.66	1.55	1.46
County 11 Barrhead	1.92	2.2	1.25	1.34	2.36	2.58	0.65	0.61	1.23	1.17
Westlock	1.28	1.45	0.39	0.41	0.83	0.88	0.3	0.28	0.64	0.61
County 7 Thorhild	0.41	0.46	0.27	0.28	0.69	0.73	0.66	0.61	1.69	1.58
County 13 Smoky Lake	1.08	1.25	1.04	1.11	2.39	2.58	0.96	0.89	2.21	2.07
County 19 St. Paul	0.71	0.81	1.07	1.12	2.54	2.7	1.5	1.38	3.55	3.34
Bonnyville	0.46	0.52	1.42	1.49	3.39	3.57	3.05	2.87	7.3	6.88
County 21 Two Hills	0.28	0.3	0.33	0.34	0.81	0.84	1.17	1.1	2.9	2.75
County 24 Vermilion River	0.84	0.84	0.93	0.93	2.36	2.41	1.1	1.1	2.79	2.85
County 27 Minburn	0.3	0.32	0.27	0.28	0.69	0.69	0.91	0.87	2.32	2.18
County 9 Beaver	0.24	0.27	0.2	0.21	0.58	0.58	0.86	0.77	2.41	2.16
County 30 Lamont	0.29	0.32	0.24	0.26	0.69	0.71	0.85	0.79	2.39	2.2
Improvement District 13	0.54	0.62	0.44	0.46	1.33	1.36	0.82	0.74	2.47	2.19
County 20 Strathcona	1.13	1.32	0.92	0.97	2.78	2.86	0.82	0.73	2.45	2.16
Sturgeon	0.82	0.94	0.54	0.57	1.37	1.43	0.66	0.6	1.67	1.52
County 28 Lac Ste. Anne	2.96	3.45	2.4	2.61	4.59	5.02	0.81	0.76	1.55	1.46
County 31 Parkland	6.34	7.5	5.2	5.68	10.26	11.22	0.82	0.76	1.62	1.5
Improvement District 14	5	5.76	3.21	3.47	5.54	6.1	0.64	0.6	1.11	1.06
Clearwater	3	3.48	2.08	2.3	3.66	4.15	0.7	0.66	1.22	1.19
Brazeau	10.04	11.73	6.43	7.02	11.53	12.78	0.64	0.6	1.15	1.09
County 25 Leduc	3.3	3.86	2.8	3	5.8	6.29	0.85	0.78	1.76	1.63
County 10 Wetaskiwin	5.53	6.4	4.84	5.21	8.4	9.35	0.87	0.81	1.52	1.46
County 22 Camrose	0.7	0.78	0.61	0.61	1.45	1.52	0.87	0.79	2.07	1.96
County 3 Ponoka	5.28	6.01	4.65	4.91	8.54	9.58	0.88	0.82	1.62	1.59
County 29 Flagstaff	0.23	0.24	0.2	0.2	0.49	0.5	0.9	0.82	2.16	2.07
Wainwright	0.41	0.43	0.35	0.36	0.87	0.88	0.87	0.85	2.14	2.05
Provost	0.39	0.43	0.37	0.39	0.9	0.96	0.95	0.91	2.28	2.24
Special Area 4	0.36	0.4	0.35	0.37	0.86	0.92	0.96	0.92	2.39	2.29
Special Area 3	0.23	0.26	0.24	0.26	0.47	0.5	1.04	1	2.03	1.96
County 18 Paintearth	0.3	0.33	0.3	0.31	0.71	0.75	0.98	0.93	2.34	2.26
County 16 Stettler	0.46	0.5	0.4	0.39	1	1.06	0.86	0.78	2.16	2.11
County 14 Lacombe	1.58	1.76	1.37	1.41	2.97	3.23	0.87	0.8	1.88	1.84
County 17 Mountain View	1.19	1.36	1.15	1.29	2.02	2.28	0.97	0.95	1.7	1.67
Kneehill	0.56	0.59	0.48	0.46	1.31	1.42	0.85	0.78	2.35	2.4
Starland	0.32	0.33	0.27	0.27	0.86	0.91	0.86	0.8	2.71	2.75
Special Area 2	0.25	0.28	0.27	0.28	0.59	0.63	1.05	1.01	2.33	2.23
Acadia Valley	0.34	0.4	0.37	0.37	0.68	0.77	1.09	0.92	2	1.92
County 16 Wheatland	0.46	0.51	0.43	0.47	1.03	1.14	0.93	0.91	2.23	2.23
Rocky View	4.07	4.99	4.09	5.01	5.8	7.21	1.01	1	1.43	1.45
Bighorn	6.84	8.28	6.95	8.33	10.15	12.31	1.02	1.01	1.48	1.49
Improvement District 8	5.82	7.04	5.99	7.21	8.68	10.59	1.03	1.02	1.49	1.5

Appendix B-2a (Continued):

Regional Municipalities	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	21.25	25.74	21.76	26.88	28.94	36.87	1.02	1.04	1.36	1.43
Foothill	7.18	8.59	7.19	8.7	10.21	12.66	1	1.01	1.42	1.47
County 2 Vulcan	0.75	0.88	0.69	0.78	1.36	1.59	0.92	0.89	1.81	1.8
County 4 Newell	0.18	0.19	0.17	0.18	0.46	0.48	0.99	0.98	2.64	2.56
Cypress	1.42	1.63	1.29	1.42	3.06	3.38	0.9	0.87	2.15	2.07
Suffield	0.67	0.77	0.63	0.69	1.4	1.49	0.93	0.9	2.09	1.93
County 8 Forty Mile	0.42	0.48	0.38	0.41	0.97	1.08	0.89	0.86	2.29	2.24
County 5 Warner	0.2	0.24	0.17	0.19	0.38	0.45	0.84	0.8	1.89	1.84
Taber	0.07	0.08	0.05	0.06	0.15	0.17	0.75	0.75	2.21	2.2
County 26 Lethbridge	0.67	0.81	0.6	0.69	1.09	1.3	0.9	0.86	1.63	1.6
Cardston	2.32	2.82	2.12	2.46	3.8	4.51	0.91	0.87	1.64	1.6
Willow Creek	6.9	8.34	6.51	7.57	10.65	12.88	0.94	0.91	1.54	1.54
Pincher Creek	12.13	14.69	11.4	13.34	18.7	22.75	0.94	0.91	1.54	1.55
Improvement District 6	15.86	18.85	15.73	18.61	23.92	29.27	0.99	0.99	1.51	1.55
Cold Lake Air Weapons Range	0.75	0.84	1.25	1.31	2.89	3.06	1.67	1.56	3.86	3.63
CFB Wainwright	0.49	0.52	0.43	0.45	1.01	1.05	0.89	0.86	2.08	2.02

Appendix B-2b: Annual water erosion (t/ha) from wheat-fallow averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{lp}, SN_t).

Regional Municipalities	BL		SN_t		SN_{lp}		SN_t/BL		SN_{lp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	0.31	0.61	0.29	0.54	0.38	0.7	0.95	0.87	1.25	1.13
Improvement District 22	0.39	0.75	0.47	0.84	0.61	1.09	1.2	1.13	1.55	1.45
Improvement District 18	1.02	2.08	1.25	2.31	2.02	3.51	1.23	1.11	1.99	1.69
Improvement District 17	1.63	3.38	1.5	2.73	2.18	3.55	0.92	0.81	1.33	1.05
Improvement District 21	0.53	1.07	0.86	1.61	1.1	2.03	1.62	1.51	2.08	1.91
Improvement District 20	1	2.12	2.69	5.11	3.24	6.14	2.7	2.41	3.24	2.9
Fairview	0.43	0.87	0.68	1.29	0.88	1.66	1.58	1.48	2.05	1.91
Peace	0.4	0.77	0.44	0.85	0.61	1.17	1.12	1.11	1.54	1.52
Spirit River	0.44	0.9	1	1.86	1.22	2.29	2.26	2.08	2.75	2.56
Improvement District 19	0.42	0.83	0.5	0.98	0.67	1.3	1.18	1.18	1.6	1.56
Smoky River	0.52	1.06	0.51	0.99	0.7	1.28	0.98	0.94	1.33	1.21
County 1 Grande Prairie	0.59	1.16	0.69	1.28	0.87	1.57	1.18	1.1	1.48	1.35
Improvement District 16	2.76	5.76	1.86	3.56	2.68	4.69	0.67	0.62	0.97	0.81
Improvement District 15	5.03	10.59	4.52	8.56	6.71	11.37	0.9	0.81	1.33	1.07
County 12 Athabasca	0.61	1.27	0.47	0.91	0.83	1.42	0.76	0.72	1.36	1.12
County 11 Barrhead	2.23	4.63	1.55	3.02	2.56	4.47	0.69	0.65	1.15	0.97
Westlock	1.5	3.02	0.48	0.92	0.9	1.52	0.32	0.3	0.6	0.5
County 7 Thorhild	0.53	1.08	0.36	0.72	0.75	1.31	0.68	0.67	1.43	1.21
County 13 Smoky Lake	1.41	3.1	1.27	2.59	2.56	4.63	0.9	0.83	1.81	1.49
County 19 St. Paul	1.02	2.11	1.46	2.81	2.75	4.83	1.44	1.33	2.7	2.29
Bonnyville	0.74	1.41	2.26	4.04	3.62	6.38	3.04	2.87	4.88	4.53
County 21 Two Hills	0.4	0.76	0.45	0.78	0.88	1.4	1.11	1.03	2.19	1.85
County 24 Vermilion River	1.58	2.49	1.59	2.34	2.65	3.78	1.01	0.94	1.68	1.52
County 27 Minburn	0.42	0.73	0.37	0.58	0.78	1.1	0.88	0.79	1.83	1.49
County 9 Beaver	0.32	0.59	0.28	0.46	0.64	0.94	0.88	0.79	2.01	1.6
County 30 Lamont	0.38	0.76	0.32	0.6	0.75	1.2	0.85	0.79	1.95	1.58
Improvement District 13	0.72	1.4	0.62	1.12	1.44	2.28	0.86	0.79	2	1.63
County 20 Strathcona	1.53	3.01	1.3	2.37	3	4.8	0.85	0.79	1.97	1.6
Sturgeon	1.01	2.03	0.74	1.41	1.49	2.55	0.73	0.7	1.48	1.26
County 28 Lac Ste. Anne	3.53	7.22	3.02	5.9	4.97	8.74	0.85	0.82	1.41	1.21
County 31 Parkland	8.15	15.99	7.23	13.63	11.05	19.66	0.89	0.85	1.36	1.23
Improvement District 14	5.75	12.25	3.85	7.54	5.9	10.44	0.67	0.62	1.03	0.85
Clearwater	4.12	7.55	2.48	5.11	3.91	6.84	0.6	0.68	0.95	0.91
Brazeau	12.29	25.04	8.34	15.99	12.23	21.15	0.68	0.64	1	0.84
County 25 Le duc	4.15	8.21	3.71	6.95	6.22	10.43	0.89	0.85	1.5	1.27
County 10 Wetaskiwin	6.59	13.21	5.98	11.35	8.85	14.5	0.91	0.86	1.34	1.1
County 22 Camrose	0.85	1.63	0.76	1.33	1.6	2.41	0.9	0.82	1.89	1.48
County 3 Ponoka	6.11	12.37	5.51	10.56	9.31	15.24	0.9	0.85	1.52	1.23
County 29 Flagstaff	0.3	0.55	0.27	0.45	0.57	0.8	0.9	0.81	1.89	1.45
Wainwright	0.63	1.05	0.53	0.79	1.01	1.38	0.85	0.76	1.62	1.31
Provost	0.56	1.13	0.52	0.96	1.09	1.65	0.94	0.85	1.95	1.47
Special Area 4	0.51	1.1	0.49	0.89	1.05	1.59	0.96	0.81	2.07	1.44
Special Area 3	0.32	0.82	0.33	0.79	0.65	1.05	1.04	0.96	2.05	1.28
County 18 Paintearth	0.41	0.85	0.4	0.72	0.85	1.27	0.98	0.85	2.06	1.49
County 16 Stettler	0.57	1.17	0.51	0.94	1.13	1.72	0.89	0.8	1.96	1.47
County 14 Lacombe	2.15	3.83	1.66	3.18	3.25	5.2	0.77	0.83	1.52	1.36
County 17 Mountain View	3.84	3.03	1.47	2.85	2.2	3.67	0.38	0.94	0.57	1.21
Kneehill	0.84	1.55	0.7	1.38	1.56	2.45	0.84	0.89	1.86	1.59
Starland	0.47	0.96	0.49	0.89	1.06	1.63	1.03	0.93	2.24	1.7
Special Area 2	0.37	0.97	0.39	0.88	0.79	1.25	1.07	0.9	2.14	1.29
Acadia Valley	0.48	1.14	0.52	1.19	1.04	1.81	1.1	1.04	2.17	1.6
County 16 Wheatland	0.69	1.43	0.67	1.42	1.25	2.04	0.97	1	1.82	1.43
Rocky View	5.09	9.69	4.92	9.82	6.15	10.22	0.97	1.01	1.21	1.06
Bighorn	10.13	16.9	8.54	17.01	10.78	18.1	0.84	1.01	1.06	1.07
Improvement District 8	8.79	14.16	7.23	14.62	9.27	15.65	0.82	1.03	1.06	1.11

Appendix B-2b (Continued):

Regional Municipalities	BL		SN_l		SN_u		SN_l/BL		SN_u/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	23.91	49.22	24.45	52.82	31.54	54.38	1.02	1.07	1.32	1.1
Foothill	8.16	17.27	8.09	17.67	11.15	19.44	0.99	1.02	1.37	1.13
County 2 Vulcan	0.97	2.41	0.83	2.09	1.54	2.87	0.85	0.86	1.58	1.19
County 4 Newell	0.25	0.69	0.26	0.68	0.6	0.96	1.02	0.98	2.35	1.39
Cypress	1.78	4.62	1.63	3.75	3.47	5.55	0.91	0.81	1.95	1.2
Suffield	0.82	2.11	0.79	2.16	1.75	2.81	0.96	1.03	2.12	1.34
County 8 Forty Mile	0.52	1.42	0.49	1.15	1.1	1.76	0.94	0.81	2.1	1.24
County 5 Warner	0.25	0.71	0.21	0.56	0.44	0.84	0.86	0.79	1.78	1.19
Taber	0.09	0.27	0.08	0.23	0.19	0.35	0.87	0.85	2.16	1.28
County 26 Lethbridge	0.81	2.07	0.7	1.76	1.21	2.34	0.86	0.85	1.5	1.13
Cardston	2.79	7.14	2.48	6.41	4.15	8.41	0.89	0.9	1.49	1.18
Willow Creek	8.26	19.25	7.33	17.18	11.59	21.55	0.89	0.89	1.4	1.12
Pincher Creek	14.56	34.72	13.2	32.94	20.57	40.1	0.91	0.95	1.41	1.15
Improvement District 6	19.12	43.63	17.99	43.53	26.01	49.79	0.94	1	1.36	1.14
Cold Lake Air Weapons Range	1.14	2.26	1.99	3.62	3.15	5.56	1.74	1.6	2.76	2.46
CFB Wainwright	0.69	1.23	0.61	1.02	1.19	1.72	0.88	0.83	1.72	1.4

Appendix B-2c: Annual water erosion (t/ha) from canola wheat fallow averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Regional Municipalities	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	0.74	0.95	0.81	0.88	0.84	1.12	1.09	0.92	1.14	1.17
Improvement District 22	0.85	1.09	0.97	0.93	1.01	1.24	1.14	0.85	1.19	1.14
Improvement District 18	1.25	1.66	1.72	2.23	2.43	2.41	1.38	1.34	1.95	1.45
Improvement District 17	1.33	2.05	1.28	1.92	1.55	2.07	0.96	0.94	1.16	1.01
Improvement District 21	1.05	1.42	1.39	0.93	1.5	1.49	1.32	0.65	1.42	1.05
Improvement District 20	2.28	3.27	3.86	1.13	4.11	2.88	1.69	0.35	1.8	0.88
Fairview	1	1.29	1.22	0.94	1.35	1.48	1.22	0.73	1.36	1.15
Peace	0.88	1.1	0.88	0.94	0.98	1.28	1	0.86	1.11	1.16
Spirit River	1.23	1.65	1.7	1	1.88	1.82	1.39	0.6	1.53	1.1
Improvement District 19	1	1.25	1.01	1.03	1.16	1.56	1.01	0.83	1.16	1.25
Smoky River	0.96	1.27	0.84	1.04	1.03	1.43	0.88	0.82	1.08	1.13
County 1 Grande Prairie	1.59	2.21	1.46	1.33	1.62	2.1	0.92	0.6	1.02	0.95
Improvement District 16	4.68	4.72	3.08	2.53	1.66	3.05	0.66	0.54	0.35	0.65
Improvement District 15	6.71	3.85	6.49	4.8	1.91	5.12	0.97	1.25	0.28	1.33
County 12 Athabasca	1.26	1.5	1.07	1.38	1.47	2.1	0.84	0.92	1.16	1.4
County 11 Barrhead	4.31	4.73	3.42	4.09	3.38	6.22	0.79	0.86	0.78	1.31
Westlock	3.44	4.13	1.66	2.19	2.1	3.3	0.48	0.53	0.61	0.8
County 7 Thorhild	1.95	2.45	1.75	2.32	2.67	3.59	0.9	0.95	1.37	1.47
County 13 Smoky Lake	1.98	2.59	2.05	2.76	3.26	3.04	1.04	1.06	1.65	1.17
County 19 St. Paul	2.61	3.58	3.74	4.98	5.47	2.56	1.43	1.39	2.09	0.72
Bonnyville	1.83	2.33	4.62	5.81	6.29	2.56	2.52	2.5	3.44	1.1
County 21 Two Hills	2.92	4.49	3.11	4.79	4.84	3.14	1.07	1.07	1.66	0.7
County 24 Vermilion River	3.26	4.11	3.72	4.45	5.11	6.13	1.14	1.08	1.57	1.49
County 27 Minburn	1.81	2.53	1.82	2.5	2.91	3.94	1.01	0.99	1.6	1.55
County 9 Beaver	1.14	1.54	1.11	1.58	1.82	2.35	0.98	1.02	1.6	1.53
County 30 Lamont	1.19	1.6	1.17	1.69	1.96	1.99	0.99	1.06	1.65	1.24
Improvement District 13	1.57	1.98	1.56	2.11	2.66	2	1	1.07	1.7	1.01
County 20 Strathcona	2.4	2.9	2.36	3.05	4.13	1.7	0.98	1.05	1.72	0.59
Sturgeon	2.48	3.02	2.28	2.94	3.25	4.61	0.92	0.97	1.31	1.53
County 28 Lac Ste. Anne	4.98	4.52	4.87	4.82	4.03	7.58	0.98	1.07	0.81	1.68
County 31 Parkland	4.07	4.38	3.95	4.51	2.34	5.25	0.97	1.03	0.58	1.2
Improvement District 14	7.36	3.73	5.37	2.73	1.53	5.61	0.73	0.73	0.21	1.51
Clearwater	2.62	3.09	2.61	3.3	2.58	4.55	0.99	1.07	0.99	1.47
Brazeau	5.33	5.29	4.43	3.98	2.48	6.13	0.83	0.75	0.46	1.16
County 25 Leduc	2.76	3.18	2.78	3.32	3.44	3.04	1.01	1.05	1.25	0.96
County 10 Wetaskiwin	2.63	3.46	2.58	3.19	3.37	4.49	0.98	0.92	1.28	1.3
County 22 Camrose	1.41	1.68	1.41	1.66	2.24	2.64	1.01	0.99	1.6	1.57
County 3 Ponoka	4.46	3.16	4.44	3.36	3.56	4.86	1	1.06	0.8	1.54
County 29 Flagstaff	1.99	2.71	2.04	2.79	2.41	4.76	1.02	1.03	1.21	1.76
Wainwright	2.5	3.34	2.52	3.19	2.99	5.64	1.01	0.96	1.2	1.69
Provost	2.55	3.46	2.7	3.66	2.03	4.11	1.06	1.06	0.79	1.19
Special Area 4	1.69	2.21	1.62	1.94	2.26	3.15	0.96	0.88	1.34	1.43
Special Area 3	1.21	1.61	1.16	1.46	1.69	2.29	0.96	0.9	1.4	1.42
County 18 Paintearth	2.25	3.09	2.32	2.95	3.07	5.06	1.03	0.96	1.37	1.64
County 16 Stettler	1.8	2.35	1.74	2.06	2.75	4.82	0.97	0.88	1.52	2.05
County 14 Lacombe	2.16	2.14	2.17	2.09	2.77	4.09	1	0.98	1.28	1.91
County 17 Mountain View	1.24	1.43	1.29	1.43	1.79	2.55	1.04	1	1.45	1.79
Kneehill	1.46	1.68	1.52	1.66	2.33	3.09	1.04	0.99	1.6	1.85
Starland	1.59	2.08	1.62	1.89	2.48	3.5	1.02	0.91	1.56	1.68
Special Area 2	1.28	1.69	1.31	1.65	1.98	2.7	1.02	0.98	1.54	1.6
Acadia Valley	1.58	2.1	1.67	2.11	2.45	3.26	1.06	1	1.55	1.55
County 16 Wheatland	1.2	1.46	1.19	1.39	1.82	2.22	0.99	0.96	1.52	1.53
Rocky View	1.66	1.72	1.69	1.54	2.4	2.02	1.02	0.9	1.45	1.18
Bighorn	2.39	2.35	2.49	2.2	3.41	3.02	1.04	0.94	1.42	1.29
Improvement District 8	2.22	2.24	2.49	2.41	3.2	3.29	1.12	1.08	1.44	1.47

Appendix B-2c (Continued):

Regional Municipalities	BL		SN_r		SN_φ		SN_r/BL		SN_φ/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	4.93	3.91	5.6	4.24	5.12	4.45	1.14	1.08	1.04	1.14
Foothill	2.52	4.09	2.36	3.1	3.56	2.41	0.94	0.76	1.41	0.59
County 2 Vulcan	1.12	1.59	1.09	1.5	1.66	2.11	0.98	0.95	1.48	1.33
County 4 Newell	1.03	1.44	1.08	1.51	1.62	2.19	1.05	1.05	1.57	1.52
Cypress	2.1	2.57	2.08	2.57	3.29	2.58	0.99	1	1.57	1
Suffield	1.62	2.1	1.67	2.16	2.67	3.22	1.04	1.03	1.65	1.54
County 8 Forty Mile	1.19	1.67	1.21	1.68	1.95	2.61	1.02	1	1.64	1.56
County 5 Warner	0.89	1.38	0.96	1.39	1.47	2.04	1.08	1.01	1.66	1.47
Taber	0.8	1.18	0.87	1.36	1.32	2.19	1.08	1.15	1.65	1.85
County 26 Lethbridge	0.95	1.49	1.09	1.53	1.41	2.16	1.14	1.03	1.47	1.45
Cardston	2.85	4.84	3.43	4.67	4.27	3.92	1.2	0.96	1.5	0.81
Willow Creek	2.51	4.51	2.58	3.39	2.17	3.9	1.03	0.75	0.86	0.87
Pincher Creek	3.82	7.53	4.96	3.07	2.21	5.81	1.3	0.41	0.58	0.77
Improvement District 6	4.6	6.57	4.22	4.41	3.48	6.21	0.92	0.67	0.76	0.95
Cold Lake Air Weapons Range	1.96	2.42	3.31	4.21	4.58	4.18	1.69	1.74	2.34	1.73
CFB Wainwright	3.52	4.86	3.66	5.09	2.45	6.01	1.04	1.05	0.7	1.24

Appendix B-2d: Annual water erosion (t/ha) from fallow-winter wheat averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Regional Municipalities	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	0.38	0.58	0.36	0.37	0.43	0.44	0.94	0.63	1.11	0.75
Improvement District 22	0.42	0.53	0.51	0.51	0.62	0.62	1.2	0.97	1.47	1.17
Improvement District 18	1.14	1.51	1.48	1.54	2	2.14	1.29	1.02	1.75	1.42
Improvement District 17	3.59	4.9	3.5	3.76	4.82	5.35	0.97	0.77	1.34	1.09
Improvement District 21	0.53	0.56	0.9	0.9	1.11	1.11	1.68	1.62	2.07	1.99
Improvement District 20	0.97	1	2.79	2.81	3.24	3.24	2.88	2.8	3.34	3.23
Fairview	0.39	0.39	0.69	0.69	0.85	0.84	1.79	1.76	2.22	2.15
Peace	0.31	0.31	0.4	0.39	0.52	0.5	1.27	1.26	1.66	1.6
Spirit River	0.42	0.43	1.05	1.05	1.24	1.21	2.48	2.41	2.92	2.79
Improvement District 19	0.24	0.25	0.37	0.37	0.47	0.46	1.53	1.49	1.96	1.89
Smoky River	0.47	0.52	0.48	0.49	0.64	0.65	1.02	0.94	1.36	1.25
County 1 Grande Prairie	0.57	0.6	0.74	0.74	0.87	0.88	1.29	1.22	1.53	1.46
Improvement District 16	6.46	7.56	5.51	5.97	7.51	8.37	0.85	0.79	1.16	1.11
Improvement District 15	15.19	18.77	14.57	15.57	20.22	22.11	0.96	0.83	1.33	1.18
County 12 Athabasca	0.69	0.84	0.54	0.56	0.91	0.97	0.79	0.66	1.32	1.15
County 11 Barrhead	3.89	4.65	3.2	3.32	4.8	5.12	0.82	0.71	1.23	1.1
Westlock	2.13	2.47	1.12	1.15	1.91	2.04	0.53	0.47	0.9	0.83
County 7 Thorhild	0.63	0.65	0.41	0.43	1.09	1.13	0.65	0.66	1.73	1.74
County 13 Smoky Lake	0.61	0.62	0.57	0.57	1.15	1.16	0.92	0.92	1.87	1.87
County 19 St. Paul	1.36	1.36	1.88	1.86	3.11	3.12	1.38	1.36	2.28	2.29
Bonnyville	0.82	0.83	2.67	2.68	3.63	3.69	3.26	3.23	4.41	4.45
County 21 Two Hills	1.66	1.66	1.51	1.49	2.85	2.85	0.91	0.9	1.71	1.72
County 24 Vermilion River	1.11	1.12	1.26	1.23	2.1	2.1	1.14	1.1	1.9	1.88
County 27 Minburn	0.7	0.71	0.63	0.6	1.24	1.23	0.9	0.85	1.77	1.73
County 9 Beaver	0.33	0.33	0.29	0.29	0.63	0.63	0.88	0.86	1.9	1.88
County 30 Lamont	0.36	0.37	0.31	0.3	0.7	0.7	0.85	0.83	1.92	1.93
Improvement District 13	0.42	0.42	0.36	0.35	0.82	0.83	0.86	0.83	1.97	1.97
County 20 Strathcona	0.63	0.65	0.53	0.53	1.2	1.22	0.84	0.82	1.89	1.88
Sturgeon	0.83	0.85	0.59	0.59	1.26	1.29	0.71	0.69	1.51	1.51
County 28 Lac Ste. Anne	5.7	6.6	5.22	5.5	7.73	8.31	0.92	0.83	1.36	1.26
County 31 Parkland	4.68	5.02	3.91	4.06	6.01	6.34	0.83	0.81	1.28	1.26
Improvement District 14	16.33	18.44	13.95	15.35	19.46	21.94	0.85	0.83	1.19	1.19
Clearwater	5.15	5.61	3.92	4.27	5.99	6.68	0.76	0.76	1.16	1.19
Brazeau	13.44	14.57	9.15	9.85	13.24	14.48	0.68	0.68	0.99	0.99
County 25 Leduc	2.73	2.94	2.38	2.51	3.76	4.04	0.87	0.85	1.38	1.38
County 10 Wetaskiwin	6.25	6.92	5.53	5.95	8.01	8.86	0.89	0.86	1.28	1.28
County 22 Camrose	0.44	0.45	0.42	0.42	0.82	0.85	0.95	0.93	1.87	1.89
County 3 Ponoka	6.17	6.63	5.87	6.21	9.18	10.12	0.95	0.94	1.49	1.53
County 29 Flagstaff	0.74	0.75	0.67	0.67	1.37	1.36	0.9	0.89	1.86	1.81
Wainwright	0.83	0.84	0.74	0.74	1.4	1.4	0.89	0.88	1.69	1.67
Provost	1.01	1.05	0.94	0.96	1.86	1.88	0.93	0.91	1.84	1.8
Special Area 4	0.5	0.52	0.47	0.47	0.97	0.98	0.94	0.91	1.93	1.88
Special Area 3	0.15	0.17	0.16	0.16	0.36	0.34	1.05	0.97	2.32	2.07
County 18 Paintearth	0.8	0.82	0.81	0.82	1.59	1.62	1.01	1	1.98	1.97
County 16 Stettler	0.53	0.53	0.52	0.54	1.13	1.16	0.99	1.02	2.13	2.2
County 14 Lacombe	1.57	1.67	1.51	1.59	2.59	2.78	0.96	0.95	1.65	1.66
County 17 Mountain View	1.18	1.33	1.16	1.29	1.75	1.94	0.98	0.98	1.47	1.47
Kneehill	0.36	0.36	0.35	0.36	0.71	0.72	0.97	0.99	1.95	2
Starland	0.31	0.31	0.33	0.33	0.75	0.79	1.06	1.06	2.4	2.55
Special Area 2	0.22	0.23	0.22	0.22	0.48	0.48	1.03	0.98	2.2	2.14
Acadia Valley	0.14	0.15	0.18	0.16	0.41	0.39	1.33	1.05	3	2.6
County 16 Wheatland	0.56	0.61	0.53	0.58	0.87	0.97	0.95	0.95	1.56	1.59
Rocky View	4.7	5.77	4.74	5.77	5.81	7.24	1.01	1	1.23	1.26
Bighorn	6.46	7.94	6.55	7.98	7.89	9.85	1.01	1	1.22	1.24
Improvement District 8	6.02	7.36	6.19	7.48	7.68	9.48	1.03	1.02	1.28	1.29

Appendix B-2d (Continued):

Regional Municipalities	BL		SN_i		SN_{tp}		SN_i/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	26.72	32.83	27.35	33.02	33.94	42.15	1.02	1.01	1.27	1.28
Foothill	15.79	18.51	15.15	17.59	21.56	25.67	0.96	0.95	1.37	1.39
County 2 Vulcan	1.44	1.63	1.31	1.45	2.15	2.45	0.91	0.89	1.49	1.51
County 4 Newell	0.18	0.18	0.2	0.2	0.45	0.46	1.12	1.14	2.49	2.57
Cypress	0.25	0.28	0.27	0.26	0.67	0.66	1.07	0.95	2.63	2.39
Suffield	0.21	0.23	0.22	0.21	0.5	0.5	1.06	0.89	2.37	2.15
County 8 Forty Mile	0.25	0.26	0.23	0.21	0.68	0.66	0.92	0.81	2.78	2.53
County 5 Warner	0.57	0.64	0.53	0.55	1.11	1.16	0.92	0.86	1.93	1.81
Taber	0.25	0.26	0.21	0.2	0.55	0.54	0.87	0.77	2.22	2.09
County 26 Lethbridge	1.21	1.36	1.11	1.22	1.92	2.12	0.91	0.89	1.58	1.56
Cardston	6.28	7.34	6.13	6.79	9.81	11.04	0.98	0.93	1.56	1.5
Willow Creek	12.02	13.98	10.93	12.37	16.8	19.61	0.91	0.88	1.4	1.4
Pincher Creek	22.38	26.6	21.32	24.79	31.26	36.91	0.95	0.93	1.4	1.39
Improvement District 6	26.7	32.38	24.85	28.46	34.44	41.27	0.93	0.88	1.29	1.27
Cold Lake Air Weapons Range	0.83	0.84	1.93	1.89	2.46	2.43	2.32	2.25	2.95	2.89
CFB Wainwright	1.47	1.51	1.35	1.37	2.62	2.65	0.92	0.91	1.79	1.76

Appendix B-3a: Annual continuous wheat yield (t/ha) averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{lp}, SN_l).

Regional Municipalities	BL		SN_l		SN_{lp}		SN_l/BL		SN_{lp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	1.33	1.34	1.56	1.58	1.58	1.61	1.17	1.18	1.19	1.2
Improvement District 22	1.46	1.47	1.76	1.76	1.76	1.8	1.2	1.2	1.21	1.23
Improvement District 18	1.4	1.4	1.63	1.63	1.64	1.65	1.16	1.16	1.17	1.17
Improvement District 17	1.44	1.45	1.72	1.72	1.74	1.74	1.19	1.19	1.21	1.2
Improvement District 21	1.5	1.5	1.82	1.82	1.83	1.84	1.21	1.21	1.22	1.23
Improvement District 20	1.48	1.49	1.81	1.81	1.8	1.8	1.22	1.22	1.22	1.21
Fairview	1.58	1.58	1.94	1.94	1.91	1.93	1.23	1.23	1.21	1.22
Peace	1.5	1.51	1.82	1.82	1.82	1.84	1.21	1.21	1.21	1.22
Spirit River	1.67	1.68	2.1	2.1	2.04	2.05	1.26	1.25	1.22	1.22
Improvement District 19	1.54	1.55	1.89	1.89	1.87	1.9	1.23	1.22	1.21	1.22
Smoky River	1.5	1.51	1.82	1.82	1.81	1.83	1.21	1.21	1.21	1.22
County 1 Grande Prairie	1.65	1.66	2.1	2.1	2.06	2.06	1.27	1.26	1.25	1.24
Improvement District 16	1.47	1.47	1.79	1.79	1.78	1.78	1.22	1.22	1.21	1.21
Improvement District 15	1.39	1.39	1.61	1.61	1.66	1.65	1.16	1.16	1.2	1.19
County 12 Athabasca	1.43	1.42	1.66	1.66	1.66	1.66	1.16	1.17	1.16	1.17
County 11 Barrhead	1.44	1.44	1.7	1.7	1.72	1.72	1.18	1.18	1.19	1.19
Westlock	1.5	1.5	1.81	1.81	1.82	1.82	1.21	1.21	1.22	1.22
County 7 Thorhild	1.52	1.52	1.86	1.87	1.86	1.87	1.23	1.23	1.23	1.23
County 13 Smoky Lake	1.62	1.62	2	2.01	2	2.01	1.23	1.24	1.23	1.24
County 19 St. Paul	1.55	1.58	1.93	1.93	1.94	1.97	1.24	1.22	1.25	1.24
Bonnyville	1.44	1.44	1.68	1.68	1.7	1.71	1.17	1.17	1.18	1.19
County 21 Two Hills	1.76	1.78	2.3	2.3	2.3	2.32	1.3	1.29	1.3	1.3
County 24 Vermilion River	1.68	1.69	2.15	2.15	2.18	2.18	1.28	1.27	1.29	1.29
County 27 Minburn	1.77	1.77	2.26	2.27	2.26	2.27	1.28	1.28	1.28	1.28
County 9 Beaver	1.86	1.86	2.4	2.4	2.4	2.41	1.29	1.29	1.29	1.29
County 30 Lamont	2	2	2.6	2.64	2.6	2.65	1.3	1.32	1.3	1.32
Improvement District 13	1.9	1.9	2.45	2.47	2.44	2.47	1.29	1.3	1.29	1.3
County 20 Strathcona	1.7	1.7	2.16	2.17	2.16	2.17	1.27	1.28	1.27	1.28
Sturgeon	1.63	1.63	2.07	2.07	2.07	2.07	1.27	1.27	1.27	1.27
County 28 Lac Ste. Anne	1.42	1.42	1.7	1.67	1.72	1.72	1.19	1.17	1.21	1.21
County 31 Parkland	1.54	1.54	1.85	1.84	1.85	1.85	1.2	1.19	1.2	1.2
Improvement District 14	1.33	1.33	1.62	1.62	1.63	1.62	1.21	1.21	1.22	1.22
Clearwater	1.21	1.21	1.59	1.59	1.58	1.57	1.31	1.31	1.3	1.3
Brazeau	1.4	1.4	1.66	1.66	1.66	1.66	1.19	1.18	1.19	1.19
County 25 Leduc	1.63	1.63	2	2	1.99	2	1.23	1.23	1.23	1.23
County 10 Wetaskiwin	1.66	1.66	2.07	2.07	2.05	2.07	1.25	1.25	1.23	1.25
County 22 Camrose	1.79	1.79	2.27	2.27	2.25	2.27	1.27	1.27	1.26	1.27
County 3 Ponoka	1.57	1.57	1.94	1.94	1.94	1.94	1.24	1.24	1.24	1.24
County 29 Flagstaff	1.69	1.69	2.16	2.16	2.17	2.2	1.28	1.28	1.29	1.3
Wainwright	1.58	1.59	2.05	2.05	2.09	2.1	1.29	1.29	1.32	1.32
Provost	1.47	1.47	1.84	1.84	1.88	1.91	1.25	1.25	1.28	1.3
Special Area 4	1.33	1.33	1.67	1.65	1.78	1.79	1.26	1.24	1.33	1.34
Special Area 3	1.2	1.21	1.6	1.59	1.79	1.79	1.33	1.31	1.49	1.48
County 18 Paintearth	1.54	1.54	1.96	1.95	1.98	1.99	1.27	1.27	1.29	1.29
County 16 Stettler	1.6	1.6	2.05	2.05	2.05	2.05	1.28	1.28	1.28	1.28
County 14 Lacombe	1.63	1.64	2.07	2.07	2.07	2.07	1.27	1.26	1.27	1.27
County 17 Mountain View	1.49	1.54	1.97	1.98	1.97	1.98	1.32	1.29	1.32	1.29
Kneehill	1.71	1.73	2.22	2.23	2.24	2.25	1.3	1.28	1.31	1.3
Starland	1.62	1.63	2.12	2.12	2.13	2.15	1.31	1.3	1.32	1.31
Special Area 2	1.28	1.3	1.72	1.69	1.83	1.84	1.35	1.3	1.43	1.41
Acadia Valley	1.15	1.19	1.62	1.62	1.87	1.87	1.41	1.35	1.63	1.57
County 16 Wheatland	1.46	1.48	1.93	1.93	1.99	2.01	1.32	1.3	1.36	1.35
Rocky View	1.55	1.59	2.11	2.14	2.11	2.14	1.37	1.35	1.36	1.35
Bighorn	1.33	1.34	1.85	1.85	1.83	1.84	1.39	1.38	1.37	1.37
Improvement District 8	1.33	1.34	1.83	1.83	1.82	1.82	1.37	1.37	1.36	1.35

Appendix B-3a (Continued):

Regional Municipalities	BL		SN_i		SN_ψ		SN_i/BL		SN_ψ/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	1.2	1.2	1.81	1.81	1.76	1.73	1.51	1.51	1.47	1.44
Foothill	1.47	1.47	2.07	2.07	2.03	2.02	1.41	1.4	1.38	1.37
County 2 Vulcan	1.35	1.35	1.83	1.8	1.93	1.93	1.35	1.34	1.43	1.43
County 4 Newell	1.26	1.26	1.67	1.66	1.84	1.84	1.33	1.32	1.47	1.47
Cypress	1.23	1.23	1.7	1.68	1.93	1.93	1.39	1.37	1.58	1.57
Suffield	1.15	1.15	1.62	1.56	1.9	1.9	1.41	1.35	1.65	1.65
County 8 Forty Mile	1.31	1.31	1.79	1.79	2	2	1.37	1.36	1.53	1.53
County 5 Warner	1.34	1.33	1.84	1.81	1.99	1.98	1.38	1.36	1.49	1.49
Taber	1.25	1.25	1.65	1.64	1.89	1.88	1.32	1.31	1.51	1.51
County 26 Lethbridge	1.3	1.28	1.74	1.73	1.94	1.9	1.34	1.35	1.49	1.48
Cardston	1.5	1.45	2.04	1.98	2.05	2.03	1.36	1.37	1.36	1.41
Willow Creek	1.41	1.38	1.93	1.92	1.94	1.93	1.37	1.39	1.37	1.4
Pincher Creek	1.48	1.43	2.01	1.98	1.98	1.95	1.36	1.38	1.34	1.37
Improvement District 6	1.43	1.41	1.97	1.96	1.9	1.88	1.38	1.39	1.33	1.34
Cold Lake Air Weapons Range	1.43	1.43	1.66	1.66	1.67	1.67	1.16	1.16	1.17	1.17
CFB Wainwright	1.61	1.61	2.05	2.05	2.07	2.08	1.28	1.28	1.29	1.3

Appendix B-3b: Annual wheat yield (t/ha) from wheat-fallow averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{lp}, SN_l).

Regional Municipalities	BL		SN_l		SN_{lp}		SN_l/BL		SN_{lp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	1.74	1.8	2.09	2.14	2.03	2.05	1.2	1.19	1.16	1.14
Improvement District 22	1.99	2.04	2.42	2.47	2.34	2.37	1.22	1.21	1.18	1.16
Improvement District 18	1.81	1.84	2.15	2.19	2.02	2.04	1.19	1.19	1.12	1.11
Improvement District 17	1.91	1.94	2.32	2.36	2.2	2.22	1.22	1.22	1.15	1.15
Improvement District 21	2.04	2.08	2.49	2.52	2.39	2.41	1.22	1.21	1.17	1.16
Improvement District 20	1.98	2.01	2.39	2.41	2.27	2.28	1.21	1.2	1.15	1.14
Fairview	2.14	2.18	2.59	2.62	2.46	2.48	1.21	1.2	1.15	1.14
Peace	2.07	2.12	2.52	2.54	2.42	2.43	1.21	1.2	1.17	1.15
Spirit River	2.27	2.31	2.73	2.77	2.56	2.59	1.21	1.2	1.13	1.12
Improvement District 19	2.1	2.16	2.52	2.57	2.4	2.41	1.2	1.19	1.14	1.12
Smoky River	2.07	2.1	2.49	2.51	2.36	2.39	1.2	1.2	1.14	1.14
County 1 Grande Prairie	2.22	2.27	2.72	2.76	2.53	2.54	1.22	1.22	1.14	1.12
Improvement District 16	1.88	1.9	2.29	2.31	2.12	2.13	1.22	1.22	1.12	1.12
Improvement District 15	1.76	1.76	2.15	2.16	2.04	2.03	1.22	1.23	1.16	1.15
County 12 Athabasca	1.82	1.84	2.13	2.15	1.96	1.98	1.17	1.17	1.08	1.07
County 11 Barrhead	1.89	1.91	2.25	2.26	2.06	2.06	1.19	1.19	1.09	1.08
Westlock	1.99	2.03	2.39	2.43	2.18	2.21	1.2	1.19	1.1	1.09
County 7 Thorhild	2.06	2.1	2.44	2.46	2.25	2.29	1.19	1.17	1.09	1.09
County 13 Smoky Lake	2.24	2.27	2.66	2.7	2.48	2.5	1.19	1.19	1.11	1.1
County 19 St. Paul	2.16	2.19	2.64	2.68	2.49	2.52	1.22	1.22	1.15	1.15
Bonnyville	1.89	1.9	2.23	2.25	2.12	2.12	1.18	1.18	1.12	1.12
County 21 Two Hills	2.55	2.6	3.16	3.2	2.95	3	1.24	1.23	1.16	1.16
County 24 Vermilion River	2.4	2.45	2.97	3.04	2.83	2.88	1.24	1.24	1.18	1.18
County 27 Minburn	2.5	2.55	3.02	3.09	2.83	2.87	1.21	1.21	1.13	1.12
County 9 Beaver	2.67	2.74	3.12	3.18	2.89	2.95	1.17	1.16	1.08	1.08
County 30 Lamont	2.97	3.05	3.43	3.5	3.18	3.23	1.15	1.15	1.07	1.06
Improvement District 13	2.77	2.84	3.22	3.28	2.99	3.04	1.16	1.16	1.08	1.07
County 20 Strathcona	2.43	2.46	2.9	2.92	2.68	2.73	1.19	1.19	1.1	1.11
Sturgeon	2.32	2.33	2.79	2.8	2.58	2.63	1.2	1.2	1.12	1.13
County 28 Lac Ste. Anne	1.88	1.88	2.22	2.22	2.05	2.04	1.18	1.18	1.09	1.08
County 31 Parkland	2.06	2.06	2.37	2.39	2.24	2.21	1.15	1.16	1.09	1.07
Improvement District 14	1.7	1.69	2.12	2.12	1.99	1.98	1.25	1.26	1.17	1.17
Clearwater	1.47	1.47	2.01	2.02	1.85	1.84	1.37	1.38	1.25	1.26
Brazeau	1.8	1.79	2.14	2.14	2.03	2.01	1.19	1.2	1.13	1.12
County 25 Leduc	2.25	2.27	2.6	2.62	2.43	2.44	1.15	1.15	1.08	1.08
County 10 Wetaskiwin	2.34	2.38	2.7	2.73	2.55	2.57	1.16	1.15	1.09	1.08
County 22 Camrose	2.53	2.58	2.93	2.99	2.71	2.77	1.16	1.16	1.07	1.07
County 3 Ponoka	2.17	2.19	2.58	2.6	2.43	2.43	1.19	1.19	1.12	1.11
County 29 Flagstaff	2.4	2.46	2.95	2.99	2.75	2.82	1.23	1.21	1.14	1.14
Wainwright	2.29	2.34	2.82	2.86	2.68	2.73	1.23	1.22	1.17	1.17
Provost	2.06	2.07	2.46	2.47	2.34	2.37	1.19	1.19	1.14	1.14
Special Area 4	1.92	1.92	2.34	2.34	2.3	2.3	1.22	1.22	1.2	1.2
Special Area 3	1.8	1.8	2.34	2.32	2.4	2.4	1.3	1.29	1.34	1.33
County 18 Paintearth	2.18	2.2	2.64	2.7	2.49	2.52	1.21	1.23	1.14	1.14
County 16 Stettler	2.26	2.31	2.73	2.81	2.56	2.6	1.21	1.22	1.13	1.12
County 14 Lacombe	2.26	2.32	2.74	2.77	2.53	2.54	1.21	1.19	1.12	1.1
County 17 Mountain View	2.07	2.08	2.56	2.62	2.41	2.43	1.24	1.26	1.16	1.16
Kneehill	2.46	2.5	2.95	3.03	2.8	2.83	1.2	1.21	1.14	1.13
Starland	2.33	2.39	2.85	2.91	2.76	2.78	1.22	1.22	1.18	1.16
Special Area 2	1.87	1.95	2.39	2.38	2.41	2.42	1.27	1.22	1.29	1.24
Acadia Valley	1.78	1.76	2.44	2.37	2.57	2.57	1.37	1.35	1.45	1.46
County 16 Wheatland	2.14	2.16	2.67	2.67	2.62	2.62	1.25	1.24	1.22	1.21
Rocky View	2.21	2.23	2.85	2.9	2.69	2.7	1.29	1.3	1.22	1.21
Bighorn	1.78	1.78	2.45	2.48	2.32	2.31	1.38	1.39	1.31	1.3
Improvement District 8	1.76	1.76	2.41	2.42	2.26	2.25	1.37	1.38	1.29	1.28

Appendix B-3b (Continued):

Regional Municipalities	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	1.51	1.48	2.35	2.26	2.19	2.1	1.56	1.52	1.45	1.42
Foothill	2.02	2.03	2.76	2.74	2.59	2.56	1.37	1.35	1.28	1.26
County 2 Vulcan	1.99	1.95	2.55	2.48	2.52	2.48	1.28	1.27	1.26	1.27
County 4 Newell	1.85	1.94	2.38	2.33	2.42	2.39	1.29	1.2	1.31	1.23
Cypress	1.92	1.88	2.58	2.51	2.66	2.66	1.34	1.34	1.39	1.42
Suffield	1.79	1.78	2.42	2.36	2.6	2.6	1.36	1.33	1.46	1.46
County 8 Forty Mile	2.03	2.02	2.7	2.64	2.71	2.71	1.33	1.31	1.33	1.34
County 5 Warner	2	1.94	2.69	2.55	2.61	2.54	1.35	1.32	1.31	1.31
Taber	1.91	1.87	2.49	2.37	2.51	2.46	1.3	1.27	1.32	1.32
County 26 Lethbridge	1.91	1.81	2.53	2.36	2.49	2.39	1.32	1.3	1.3	1.32
Cardston	2.04	1.92	2.69	2.53	2.48	2.36	1.32	1.31	1.21	1.23
Willow Creek	1.92	1.84	2.57	2.43	2.44	2.33	1.33	1.32	1.27	1.27
Pincher Creek	1.93	1.8	2.6	2.41	2.4	2.24	1.34	1.34	1.24	1.25
Improvement District 6	1.82	1.7	2.53	2.37	2.34	2.2	1.39	1.39	1.29	1.29
Cold Lake Air Weapons Range	1.86	1.88	2.23	2.26	2.09	2.1	1.2	1.2	1.12	1.12
CFB Wainwright	2.27	2.3	2.75	2.77	2.58	2.63	1.21	1.21	1.14	1.14

Appendix B-3c: Annual canola yield (t/ha) from canola-wheat-fallow averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{lp}, SN_l).

Regional Municipalities	BL		SN_l		SN_{lp}		SN_l/BL		SN_{lp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	2.16	1.73	2.63	2.18	2.17	1.71	1.21	1.26	1	0.99
Improvement District 22	2.3	1.81	2.87	2.31	2.31	1.76	1.25	1.28	1	0.98
Improvement District 18	2.78	2.27	3.03	2.42	2.13	1.5	1.09	1.07	0.77	0.66
Improvement District 17	2.45	1.93	3	2.3	2.16	1.55	1.23	1.2	0.88	0.8
Improvement District 21	2.4	1.89	3.06	2.47	2.4	1.76	1.27	1.31	1	0.93
Improvement District 20	2.09	1.59	2.89	2.15	2.16	1.49	1.38	1.36	1.03	0.94
Fairview	2.43	1.88	2.95	2.34	2.24	1.72	1.22	1.24	0.92	0.91
Peace	2.59	2.08	3.34	2.6	2.25	2.04	1.29	1.25	0.87	0.98
Spirit River	2.26	1.66	2.86	2.1	2.06	1.47	1.27	1.27	0.91	0.89
Improvement District 19	2.4	1.85	3.17	2.5	2.22	1.75	1.32	1.35	0.93	0.94
Smoky River	2.51	1.9	3.21	2.49	2.36	1.84	1.28	1.31	0.94	0.97
County 1 Grande Prairie	1.88	1.43	2.76	2	2.07	1.36	1.47	1.4	1.1	0.95
Improvement District 16	1.56	1.21	2.61	1.81	2.05	1.33	1.68	1.5	1.32	1.09
Improvement District 15	2.09	1.67	2.99	2.19	2.11	1.52	1.43	1.31	1.01	0.91
County 12 Athabasca	2.98	2.5	2.9	2.3	1.96	1.37	0.97	0.92	0.66	0.55
County 11 Barrhead	3.06	2.41	3.1	2.27	2.08	1.33	1.01	0.94	0.68	0.55
Westlock	3.14	2.61	2.95	2.19	2.05	1.33	0.94	0.84	0.65	0.51
County 7 Thorhild	3.17	2.76	3.01	2.39	2.06	1.49	0.95	0.86	0.65	0.54
County 13 Smoky Lake	3.09	2.7	2.92	2.23	2.09	1.35	0.94	0.82	0.67	0.5
County 19 St. Paul	2.97	2.52	2.86	2.13	2.1	1.39	0.96	0.85	0.71	0.55
Bonnyville	2.76	2.35	2.86	2.24	2.03	1.49	1.04	0.95	0.73	0.63
County 21 Two Hills	3	2.43	2.72	2.02	2.1	1.43	0.91	0.83	0.7	0.59
County 24 Vermilion River	2.97	2.63	2.91	2.27	2.1	1.48	0.98	0.86	0.71	0.56
County 27 Minburn	3.05	2.57	2.91	2.09	2.08	1.44	0.95	0.82	0.68	0.56
County 9 Beaver	3.18	2.63	2.96	2.09	2.17	1.52	0.93	0.79	0.68	0.58
County 30 Lamont	3.29	2.88	2.74	1.96	2.26	1.61	0.83	0.68	0.69	0.56
Improvement District 13	3.34	2.88	2.86	2.08	2.23	1.58	0.86	0.72	0.67	0.55
County 20 Strathcona	3.38	2.94	3.08	2.29	2.13	1.5	0.91	0.78	0.63	0.51
Sturgeon	3.4	2.95	2.61	2.02	2.14	1.38	0.77	0.69	0.63	0.47
County 28 Lac Ste. Anne	3.04	2.49	3.04	2.34	2.09	1.4	1	0.94	0.69	0.56
County 31 Parkland	3.28	2.77	3.45	2.61	2.3	1.7	1.05	0.94	0.7	0.61
Improvement District 14	1.33	1.13	2.61	1.82	2	1.19	1.97	1.61	1.5	1.05
Clearwater	1.08	0.91	1.78	1.49	1.7	1.13	1.64	1.63	1.57	1.24
Brazeau	2.1	1.77	2.9	2.36	2.02	1.43	1.38	1.33	0.96	0.81
County 25 Leduc	3.32	2.73	3.17	2.4	2.17	1.54	0.96	0.88	0.65	0.56
County 10 Wetaskiwin	2.95	2.25	2.68	2.17	2.15	1.46	0.91	0.96	0.73	0.65
County 22 Camrose	3.07	2.46	2.41	1.97	2.14	1.51	0.79	0.8	0.7	0.62
County 3 Ponoka	2.91	2.41	2.79	2.26	2.19	1.53	0.96	0.94	0.75	0.64
County 29 Flagstaff	2.87	2.43	2.63	2.11	2.04	1.39	0.92	0.87	0.71	0.57
Wainwright	2.74	2.34	2.72	1.96	2.08	1.34	0.99	0.83	0.76	0.57
Provost	2.5	2.11	2.9	2.28	1.85	1.36	1.16	1.08	0.74	0.64
Special Area 4	2.2	1.91	2.91	2.55	2.06	1.56	1.32	1.33	0.94	0.81
Special Area 3	1.82	1.65	2.57	2.24	2.4	1.99	1.42	1.35	1.32	1.2
County 18 Paintearth	2.7	2.27	3.08	2.72	1.94	1.53	1.14	1.2	0.72	0.67
County 16 Stettler	2.72	2.25	2.51	2.35	2.01	1.38	0.92	1.05	0.74	0.61
County 14 Lacombe	2.67	2.18	2.55	2.3	2.22	1.53	0.96	1.06	0.83	0.7
County 17 Mountain View	2.11	1.8	2.81	2.5	2.37	1.74	1.33	1.39	1.13	0.96
Kneehill	2.89	2.53	2.96	2.78	2.45	1.88	1.02	1.1	0.85	0.74
Starland	2.7	2.25	2.57	2.5	2.13	1.84	0.95	1.11	0.79	0.82
Special Area 2	1.96	1.78	2.45	2.11	2.16	1.91	1.25	1.18	1.1	1.07
Acadia Valley	1.68	1.46	2.44	2.03	2.19	1.82	1.45	1.39	1.31	1.25
County 16 Wheatland	2.59	2.34	2.76	2.51	2.55	2.04	1.07	1.07	0.98	0.87
Rocky View	2.2	1.89	2.79	2.67	2.22	1.85	1.26	1.41	1.01	0.98
Bighorn	1.08	1.02	2.22	2.41	1.96	1.56	2.05	2.36	1.81	1.52
Improvement District 8	1.17	1.06	2.16	2.22	1.93	1.49	1.84	2.08	1.65	1.4

Appendix B-3c (Continued):

Regional Municipalities	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	0.95	0.86	1.96	1.82	1.63	1.43	2.06	2.11	1.72	1.66
Foothill	1.81	1.55	2.81	2.61	2.03	1.94	1.55	1.68	1.12	1.25
County 2 Vulcan	2.13	1.98	2.44	2.15	2.07	1.81	1.14	1.09	0.97	0.91
County 4 Newell	1.99	1.86	2.28	1.94	2.26	1.9	1.14	1.04	1.13	1.02
Cypress	1.56	1.55	2.3	1.92	2.03	1.68	1.47	1.24	1.3	1.08
Suffield	1.67	1.53	2	1.85	2.02	1.86	1.2	1.21	1.21	1.22
County 8 Forty Mile	1.66	1.68	2.25	2.06	1.92	1.63	1.36	1.23	1.15	0.97
County 5 Warner	1.64	1.63	2.23	2.1	1.87	1.69	1.36	1.29	1.14	1.04
Taber	1.9	1.81	2.05	1.89	1.86	1.56	1.08	1.05	0.98	0.87
County 26 Lethbridge	1.89	1.78	2.09	1.97	1.97	1.61	1.11	1.11	1.04	0.91
Cardston	1.59	1.45	2.27	1.94	2.09	1.68	1.43	1.33	1.31	1.16
Willow Creek	1.63	1.51	2.52	2.26	2.03	2	1.54	1.5	1.25	1.33
Pincher Creek	1.57	1.35	2.68	2.29	2.3	1.99	1.71	1.7	1.47	1.48
Improvement District 6	1.32	1.18	2.69	2.35	2.19	2.09	2.04	1.99	1.66	1.77
Cold Lake Air Weapons Range	2.97	2.52	3.09	2.55	2.33	1.57	1.04	1.01	0.78	0.62
CFB Wainwright	2.69	2.25	2.88	2.09	1.82	1.34	1.07	0.93	0.67	0.6

Appendix B-3d: Annual wheat yield (t/ha) from canola-wheat-fallow averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Regional Municipalities	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	3.28	3.2	4	3.96	3.92	3.88	1.22	1.24	1.2	1.21
Improvement District 22	3.57	3.45	4.29	4.26	4.16	4.15	1.2	1.24	1.17	1.2
Improvement District 18	3.92	3.81	4.51	4.43	4.37	4.28	1.15	1.16	1.12	1.13
Improvement District 17	3.81	3.71	4.65	4.58	4.53	4.49	1.22	1.23	1.19	1.21
Improvement District 21	3.81	3.63	4.56	4.48	4.39	4.38	1.2	1.23	1.15	1.21
Improvement District 20	3.76	3.61	4.61	4.48	4.46	4.39	1.22	1.24	1.19	1.22
Fairview	3.89	3.74	4.52	4.44	4.4	4.37	1.16	1.19	1.13	1.17
Peace	3.81	3.61	4.51	4.43	4.26	4.32	1.19	1.23	1.12	1.2
Spirit River	3.89	3.8	4.52	4.43	4.47	4.31	1.16	1.17	1.15	1.14
Improvement District 19	3.83	3.72	4.49	4.4	4.3	4.26	1.17	1.18	1.12	1.14
Smoky River	3.81	3.68	4.47	4.42	4.3	4.31	1.17	1.2	1.13	1.17
County 1 Grande Prairie	3.7	3.7	4.59	4.52	4.65	4.42	1.24	1.22	1.26	1.19
Improvement District 16	3.53	3.47	4.67	4.59	4.78	4.61	1.32	1.32	1.35	1.33
Improvement District 15	3.73	3.66	4.86	4.7	4.7	4.65	1.3	1.28	1.26	1.27
County 12 Athabasca	4.15	4.07	4.64	4.56	4.6	4.52	1.12	1.12	1.11	1.11
County 11 Barrhead	4.27	4.04	4.83	4.69	4.67	4.52	1.13	1.16	1.09	1.12
Westlock	4.3	4.15	4.76	4.63	4.66	4.63	1.11	1.12	1.08	1.12
County 7 Thorhild	4.29	4.22	4.63	4.42	4.55	4.47	1.08	1.05	1.06	1.06
County 13 Smoky Lake	4.16	4.07	4.56	4.44	4.44	4.29	1.1	1.09	1.07	1.05
County 19 St. Paul	4	3.88	4.36	4.27	4.25	4.16	1.09	1.1	1.06	1.07
Bonnyville	3.84	3.76	4.15	3.99	4.06	4.04	1.08	1.06	1.06	1.07
County 21 Two Hills	4.01	3.84	4.35	4.28	4.39	4.28	1.08	1.12	1.1	1.11
County 24 Vermilion River	3.94	3.86	4.32	4.29	4.29	4.24	1.09	1.11	1.09	1.1
County 27 Minburn	4.07	3.94	4.42	4.39	4.43	4.35	1.09	1.11	1.09	1.1
County 9 Beaver	4.14	4.01	4.54	4.45	4.53	4.41	1.1	1.11	1.1	1.1
County 30 Lamont	4.29	4.23	4.58	4.5	4.6	4.44	1.07	1.06	1.07	1.05
Improvement District 13	4.31	4.22	4.61	4.52	4.57	4.43	1.07	1.07	1.06	1.05
County 20 Strathcona	4.33	4.23	4.63	4.53	4.46	4.39	1.07	1.07	1.03	1.04
Sturgeon	4.39	4.26	4.59	4.52	4.57	4.43	1.04	1.06	1.04	1.04
County 28 Lac Ste. Anne	4.3	4.14	4.89	4.7	4.73	4.63	1.14	1.13	1.1	1.12
County 31 Parkland	4.42	4.36	4.96	4.7	4.86	4.72	1.12	1.08	1.1	1.08
Improvement District 14	3.41	3.38	4.89	4.73	4.88	4.78	1.43	1.4	1.43	1.42
Clearwater	3.02	3.02	4.86	4.77	5.07	4.94	1.61	1.58	1.68	1.64
Brazeau	3.87	3.88	4.93	4.73	4.95	4.83	1.27	1.22	1.28	1.24
County 25 Leduc	4.38	4.31	4.82	4.64	4.69	4.58	1.1	1.08	1.07	1.06
County 10 Wetaskiwin	4.26	4.18	4.82	4.68	4.75	4.62	1.13	1.12	1.11	1.11
County 22 Camrose	4.08	4	4.56	4.48	4.62	4.48	1.12	1.12	1.13	1.12
County 3 Ponoka	4.17	4.14	4.77	4.62	4.72	4.62	1.14	1.11	1.13	1.11
County 29 Flagstaff	3.93	3.84	4.44	4.36	4.45	4.38	1.13	1.14	1.13	1.14
Wainwright	3.85	3.75	4.29	4.24	4.31	4.29	1.11	1.13	1.12	1.14
Provost	3.48	3.35	4.08	3.95	4.17	4.12	1.17	1.18	1.2	1.23
Special Area 4	2.97	2.87	3.76	3.64	4.08	4.02	1.27	1.27	1.38	1.4
Special Area 3	2.36	2.24	3.25	3.08	4.05	3.99	1.37	1.37	1.71	1.78
County 18 Paintearth	3.67	3.55	4.35	4.24	4.41	4.39	1.19	1.19	1.2	1.23
County 16 Stettler	3.8	3.72	4.47	4.39	4.5	4.36	1.17	1.18	1.18	1.17
County 14 Lacombe	4.03	3.97	4.74	4.73	4.85	4.66	1.18	1.19	1.21	1.17
County 17 Mountain View	3.73	3.72	4.8	4.86	4.96	4.82	1.29	1.31	1.33	1.29
Kneehill	3.83	3.79	4.39	4.42	4.51	4.46	1.15	1.17	1.18	1.18
Starland	3.61	3.47	4.23	4.15	4.42	4.4	1.17	1.2	1.22	1.27
Special Area 2	2.6	2.47	3.42	3.26	4.04	3.98	1.32	1.32	1.56	1.61
Acadia Valley	2.09	1.92	2.95	2.8	3.96	3.89	1.41	1.46	1.89	2.02
County 16 Wheatland	3.45	3.33	4.17	4.1	4.35	4.36	1.21	1.23	1.26	1.31
Rocky View	3.63	3.59	4.9	4.92	4.91	4.88	1.35	1.37	1.35	1.36
Bighorn	2.99	3.04	4.92	5.06	5	4.93	1.65	1.66	1.68	1.62
Improvement District 8	3.06	3.09	4.9	4.99	5.05	4.95	1.6	1.62	1.65	1.6

Appendix B-3d (Continued):

Regional Municipalities	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	2.3	2.25	4.8	4.83	4.98	5.01	2.09	2.15	2.16	2.23
Foothill	3.3	3.19	5.02	4.99	5.07	5.09	1.52	1.56	1.54	1.6
County 2 Vulcan	2.83	2.69	3.81	3.68	4.28	4.23	1.35	1.37	1.51	1.57
County 4 Newell	2.48	2.36	3.32	3.13	3.94	3.86	1.34	1.33	1.59	1.64
Cypress	2.43	2.35	3.4	3.22	4.03	4.02	1.4	1.37	1.66	1.71
Suffield	2.15	2.02	2.89	2.72	3.86	3.87	1.34	1.35	1.8	1.92
County 8 Forty Mile	2.62	2.5	3.61	3.4	4.13	4.07	1.38	1.36	1.58	1.63
County 5 Warner	2.64	2.51	3.92	3.75	4.36	4.3	1.48	1.49	1.65	1.71
Taber	2.44	2.27	3.33	3.07	3.98	3.87	1.36	1.35	1.63	1.7
County 26 Lethbridge	2.52	2.35	3.62	3.41	4.16	4.07	1.44	1.45	1.65	1.73
Cardston	3.09	2.94	4.6	4.44	4.79	4.66	1.49	1.51	1.55	1.58
Willow Creek	3.02	2.91	4.57	4.46	4.74	4.69	1.51	1.53	1.57	1.61
Pincher Creek	3.23	3.07	5.06	4.9	5.03	4.97	1.57	1.59	1.56	1.62
Improvement District 6	2.92	2.81	5.04	4.92	5.08	5.04	1.73	1.75	1.74	1.79
Cold Lake Air Weapons Range	4.03	3.91	4.48	4.37	4.39	4.24	1.11	1.12	1.09	1.08
CFB Wainwright	3.81	3.69	4.23	4.14	4.29	4.24	1.11	1.12	1.13	1.15

Appendix B-3e: Annual winter wheat yield (t/ha) from winter wheat-fallow averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{lp}, SN_l).

Regional Municipalities	BL		SN_l		SN_{lp}		SN_l/BL		SN_{lp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	2.13	2.01	2.36	2.32	2.4	2.19	1.11	1.15	1.13	1.09
Improvement District 22	2.37	2.29	2.63	2.58	2.68	2.52	1.11	1.12	1.13	1.1
Improvement District 18	2.11	2.06	3.77	2.85	3.52	2.88	1.78	1.39	1.67	1.4
Improvement District 17	2.45	2.24	3.42	2.89	3.57	3.21	1.4	1.29	1.46	1.44
Improvement District 21	2.39	2.36	2.89	2.65	2.72	2.58	1.21	1.12	1.14	1.09
Improvement District 20	2.24	2.24	3.04	2.61	2.81	2.5	1.35	1.17	1.26	1.12
Fairview	2.37	2.4	3.27	2.7	2.77	2.65	1.38	1.12	1.17	1.1
Peace	2.35	2.36	2.96	2.78	2.83	2.55	1.26	1.18	1.2	1.08
Spirit River	2.45	2.5	3.15	2.62	2.76	2.64	1.29	1.05	1.13	1.06
Improvement District 19	2.28	2.3	3.42	2.65	2.74	2.66	1.5	1.15	1.2	1.16
Smoky River	2.35	2.33	3.37	2.85	2.91	3.03	1.43	1.22	1.24	1.3
County 1 Grande Prairie	2.41	2.44	2.86	2.57	2.83	2.57	1.19	1.05	1.17	1.05
Improvement District 16	2.21	2.19	3.35	2.62	3.53	2.65	1.51	1.2	1.6	1.21
Improvement District 15	2.32	2.11	3.66	2.65	4.07	3.45	1.58	1.25	1.75	1.63
County 12 Athabasca	2.01	1.99	4.42	2.63	3.45	2.87	2.19	1.32	1.71	1.44
County 11 Barrhead	2.15	2.12	3.65	2.07	3.89	2.69	1.7	0.97	1.81	1.27
Westlock	2.24	2.23	3.92	2.26	3.84	2.96	1.75	1.01	1.71	1.33
County 7 Thorhild	2.23	2.23	4.55	2.55	3.78	2.96	2.04	1.14	1.7	1.33
County 13 Smoky Lake	2.45	2.45	3.69	2.98	3.24	3.05	1.51	1.22	1.32	1.25
County 19 St. Paul	2.37	2.4	3.95	2.71	3.34	3	1.67	1.13	1.41	1.25
Bonnyville	2.09	2.09	4.34	2.62	3.6	2.91	2.08	1.25	1.72	1.39
County 21 Two Hills	2.79	2.81	3.54	2.75	3.06	2.86	1.27	0.98	1.1	1.02
County 24 Vermilion River	2.63	2.63	4.1	2.55	3.39	2.8	1.56	0.97	1.29	1.06
County 27 Minburn	2.72	2.73	3.56	2.55	3.04	2.6	1.31	0.93	1.11	0.95
County 9 Beaver	2.87	2.87	3.35	2.63	3.13	2.63	1.17	0.91	1.09	0.91
County 30 Lamont	3.18	3.18	3.38	3.01	3.29	3.01	1.06	0.95	1.04	0.95
Improvement District 13	2.97	2.97	3.12	2.74	3.36	2.76	1.05	0.92	1.13	0.93
County 20 Strathcona	2.63	2.63	2.79	2.38	3.55	2.43	1.06	0.9	1.35	0.92
Sturgeon	2.49	2.49	3.17	2.33	3.3	2.48	1.27	0.94	1.33	1
County 28 Lac Ste. Anne	2.11	2.08	3.11	2.1	3.79	2.35	1.47	1.01	1.79	1.13
County 31 Parkland	2.25	2.23	2.56	2.01	2.71	2.13	1.14	0.9	1.2	0.95
ImprovementDistrict 14	2.15	2.14	3.94	2.29	4.01	3.06	1.83	1.07	1.86	1.43
Clearwater	2.14	1.88	3.67	2.69	3.49	2.94	1.72	1.43	1.63	1.57
Brazeau	2.15	2	3.38	2.09	2.91	2.53	1.57	1.04	1.35	1.26
County 25 Leduc	2.46	2.43	2.52	2.12	2.94	2.25	1.02	0.87	1.2	0.92
County 10 Wetaskiwin	2.65	2.52	2.7	2.23	2.72	2.45	1.02	0.88	1.02	0.97
County 22 Camrose	2.69	2.71	2.89	2.41	2.94	2.4	1.07	0.89	1.09	0.88
County 3 Ponoka	2.53	2.41	2.75	2.09	3.11	2.19	1.09	0.87	1.23	0.91
County 29 Flagstaff	2.58	2.62	3.13	2.39	2.86	2.43	1.22	0.91	1.11	0.93
Wainwright	2.47	2.49	3.89	2.35	3.48	2.41	1.57	0.94	1.41	0.97
Provost	2.13	2.18	2.86	2.05	2.79	2.12	1.35	0.94	1.31	0.97
Special Area 4	1.98	2.02	3.7	1.95	2.78	2.31	1.87	0.96	1.4	1.14
Special Area 3	1.85	1.84	3.72	1.92	3.13	2.2	2.01	1.04	1.69	1.2
County 18 Paintearth	2.34	2.36	2.66	2.17	2.5	2.24	1.14	0.92	1.07	0.95
County 16 Stettler	2.4	2.41	2.67	2.21	2.55	2.21	1.11	0.92	1.06	0.92
County 14 Lacombe	2.55	2.45	2.97	2.24	3.03	2.25	1.16	0.91	1.19	0.92
County 17 Mountain View	2.42	2.34	3.17	2.14	3.13	2.49	1.31	0.91	1.29	1.06
Kneehill	2.79	2.53	2.77	2.37	2.77	2.39	0.99	0.94	0.99	0.95
Starland	2.47	2.4	2.77	2.29	2.74	2.32	1.12	0.96	1.11	0.97
Special Area 2	2.01	1.89	3.2	1.93	3.04	2.1	1.6	1.02	1.52	1.11
Acadia Valley	1.83	1.8	2.78	2	2.61	2.11	1.52	1.11	1.42	1.17
County 16 Wheatland	3.05	2.36	2.57	2.06	2.71	2.14	0.84	0.88	0.89	0.91
Rocky View	3.16	2.89	2.78	2.29	2.73	2.34	0.88	0.79	0.86	0.81
Bighorn	2.13	2.31	2.92	2.1	2.95	2.42	1.37	0.91	1.38	1.05
Improvement District 8	2.21	2.25	3.1	2.16	3.08	2.47	1.4	0.96	1.39	1.09

Appendix B-3e (Continued):

Regional Municipalities	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	2.04	2.04	2.58	2.03	3	2.12	1.26	0.99	1.47	1.04
Foothill	2.76	2.46	2.67	2.13	2.73	2.16	0.97	0.86	0.99	0.88
County 2 Vulcan	2.91	1.93	2.63	1.91	2.69	1.99	0.9	0.99	0.92	1.04
County 4 Newell	2.71	1.84	2.5	1.81	2.7	1.94	0.92	0.98	0.99	1.05
Cypress	2.48	1.86	2.71	1.96	2.76	2.12	1.09	1.05	1.11	1.14
Suffield	2.47	1.73	2.68	1.9	2.71	2.1	1.09	1.1	1.1	1.22
County 8 Forty Mile	2.95	1.81	2.88	1.95	2.87	2.08	0.97	1.08	0.97	1.15
County 5 Warner	2.86	1.73	2.9	1.94	2.84	2.03	1.01	1.12	0.99	1.17
Taber	3.27	1.85	2.7	1.87	2.87	1.95	0.83	1.01	0.88	1.05
County 26 Lethbridge	3	1.7	2.78	1.9	2.79	1.96	0.93	1.11	0.93	1.15
Cardston	2.49	1.89	2.92	2.03	2.83	2.01	1.17	1.08	1.13	1.07
Willow Creek	2.56	1.94	2.68	1.97	2.76	2.01	1.05	1.02	1.08	1.04
Pincher Creek	2.49	1.99	2.54	1.99	3.13	1.99	1.02	1	1.25	1
Improvement District 6	2.38	2.07	2.44	2.04	3.17	2.11	1.03	0.98	1.33	1.02
Cold Lake Air Weapons Range	2.09	2.09	4.39	2.87	3.82	2.82	2.1	1.37	1.83	1.35
CFB Wainwright	2.37	2.42	3.4	2.29	2.99	2.33	1.43	0.95	1.26	0.96

Appendix B-4a: Annual continuous spring wheat residue (t/ha) averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{lp}, SN_{l}).

Regional Municipalities	BL		SN_{l}		SN_{lp}		SN_{l}/BL		SN_{lp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	3.12	2.11	3.15	2.06	3.47	2.34	1.01	0.97	1.11	1.11
Improvement District 22	3.28	2.22	3.42	2.21	3.73	2.49	1.04	1	1.14	1.12
Improvement District 18	2.98	2	3.07	1.96	3.38	2.24	1.03	0.98	1.14	1.12
Improvement District 17	3.13	2.1	3.21	2.05	3.51	2.32	1.02	0.98	1.12	1.1
Improvement District 21	3.26	2.18	3.43	2.19	3.72	2.45	1.05	1.01	1.14	1.13
Improvement District 20	3.13	2.07	3.31	2.1	3.57	2.33	1.06	1.01	1.14	1.13
Fairview	3.27	2.18	3.58	2.27	3.84	2.51	1.09	1.04	1.17	1.15
Peace	3.22	2.15	3.43	2.19	3.73	2.44	1.06	1.02	1.16	1.14
Spirit River	3.36	2.22	3.8	2.4	4.03	2.62	1.13	1.08	1.2	1.18
Improvement District 19	3.18	2.11	3.49	2.21	3.74	2.44	1.1	1.05	1.18	1.16
Smoky River	3.2	2.13	3.41	2.17	3.69	2.42	1.07	1.02	1.16	1.13
County 1 Grande Prairie	3.4	2.24	3.81	2.41	4.01	2.6	1.12	1.07	1.18	1.16
Improvement District 16	3.15	2.1	3.25	2.05	3.48	2.28	1.03	0.98	1.1	1.09
Improvement District 15	2.98	1.99	2.98	1.89	3.29	2.17	1	0.95	1.1	1.09
County 12 Athabasca	2.91	1.94	3.03	1.91	3.32	2.18	1.04	0.99	1.14	1.12
County 11 Barrhead	2.97	1.97	3.11	1.96	3.4	2.22	1.04	0.99	1.14	1.13
Westlock	3.07	2.03	3.26	2.06	3.55	2.32	1.06	1.01	1.16	1.14
County 7 Thorhild	3.07	2.03	3.32	2.09	3.61	2.35	1.08	1.03	1.18	1.16
County 13 Smoky Lake	3.25	2.15	3.61	2.27	3.89	2.53	1.11	1.06	1.2	1.18
County 19 St. Paul	3.21	2.13	3.54	2.24	3.83	2.5	1.11	1.05	1.19	1.17
Bonnyville	3.01	2	3.21	2.04	3.5	2.3	1.07	1.02	1.16	1.15
County 21 Two Hills	3.54	2.34	4.09	2.58	4.36	2.82	1.16	1.1	1.23	1.2
County 24 Vermilion River	3.44	2.29	3.85	2.42	4.13	2.67	1.12	1.06	1.2	1.17
County 27 Minburn	3.54	2.34	4.03	2.53	4.29	2.76	1.14	1.08	1.21	1.18
County 9 Beaver	3.66	2.39	4.2	2.62	4.42	2.83	1.15	1.1	1.21	1.18
County 30 Lamont	3.87	2.53	4.59	2.87	4.83	3.1	1.18	1.14	1.25	1.22
ImprovementDistrict 13	3.69	2.41	4.28	2.66	4.52	2.89	1.16	1.11	1.23	1.2
County 20 Strathcona	3.36	2.19	3.77	2.33	4.04	2.59	1.12	1.07	1.2	1.18
Sturgeon	3.24	2.13	3.59	2.22	3.89	2.49	1.11	1.04	1.2	1.17
County 28 Lac Ste. Anne	2.92	1.94	3.04	1.9	3.33	2.17	1.04	0.98	1.14	1.12
County 31 Parkland	3.08	2.03	3.27	2.03	3.54	2.29	1.06	1	1.15	1.13
Improvement District 14	3.07	2.05	2.93	1.85	3.23	2.12	0.95	0.9	1.05	1.03
Clearwater	3.4	2.29	2.88	1.8	3.18	2.09	0.85	0.78	0.93	0.91
Brazeau	2.89	1.91	2.94	1.83	3.23	2.11	1.02	0.96	1.12	1.1
County 25 Leduc	3.22	2.1	3.51	2.17	3.77	2.42	1.09	1.03	1.17	1.15
County 10 Wetaskiwin	3.27	2.12	3.59	2.21	3.85	2.47	1.1	1.04	1.18	1.16
County 22 Camrose	3.53	2.29	3.98	2.47	4.2	2.68	1.13	1.08	1.19	1.17
County 3 Ponoka	3.18	2.08	3.42	2.11	3.69	2.37	1.08	1.02	1.16	1.14
County 29 Flagstaff	3.4	2.23	3.81	2.36	4.06	2.6	1.12	1.06	1.2	1.17
Wainwright	3.31	2.2	3.67	2.29	3.96	2.55	1.11	1.05	1.2	1.16
Provost	3.17	2.1	3.39	2.11	3.68	2.37	1.07	1.01	1.16	1.13
Special Area 4	3.13	2.05	3.25	2.02	3.51	2.26	1.04	0.98	1.12	1.1
Special Area 3	3.24	2.1	3.3	2.04	3.46	2.2	1.02	0.97	1.07	1.05
County 18 Paintearth	3.27	2.14	3.53	2.18	3.76	2.4	1.08	1.02	1.15	1.12
County 16 Stettler	3.29	2.15	3.61	2.22	3.82	2.44	1.1	1.03	1.16	1.14
County 14 Lacombe	3.32	2.17	3.62	2.23	3.87	2.48	1.09	1.03	1.16	1.14
County 17 Mountain View	3.33	2.2	3.37	2.07	3.63	2.33	1.01	0.94	1.09	1.06
Kneehill	3.53	2.31	3.84	2.36	4.05	2.57	1.09	1.02	1.15	1.11
Starland	3.45	2.24	3.73	2.28	3.92	2.47	1.08	1.02	1.13	1.1
Special Area 2	3.31	2.15	3.38	2.08	3.55	2.25	1.02	0.97	1.07	1.05
Acadia Valley	3.35	2.17	3.49	2.13	3.57	2.25	1.04	0.98	1.07	1.04
County 16 Wheatland	3.22	2.09	3.42	2.08	3.64	2.29	1.06	0.99	1.13	1.09
Rocky View	3.54	2.34	3.61	2.2	3.86	2.45	1.02	0.94	1.09	1.05
Bighorn	3.55	2.38	3.19	1.96	3.47	2.22	0.9	0.82	0.98	0.94
Improvement District 8	3.53	2.37	3.17	1.95	3.45	2.22	0.9	0.83	0.98	0.94

Appendix B-4a (Continued):

Regional Municipalities	BL		SN_t		SN_ψ		SN_t/BL		SN_ψ/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	4.03	2.72	3.23	1.98	3.38	2.14	0.8	0.73	0.84	0.79
Foothill	3.55	2.34	3.5	2.12	3.71	2.33	0.99	0.91	1.05	1
County 2 Vulcan	3.15	2.02	3.28	1.96	3.49	2.17	1.04	0.97	1.11	1.08
County 4 Newell	3.22	2.06	3.29	1.97	3.48	2.18	1.02	0.95	1.08	1.06
Cypress	3.25	2.07	3.42	2.04	3.6	2.24	1.05	0.98	1.11	1.08
Suffield	3.28	2.09	3.41	2.04	3.6	2.24	1.04	0.98	1.1	1.07
County 8 Forty Mile	3.18	2.01	3.4	2.01	3.6	2.22	1.07	1	1.13	1.1
County 5 Warner	3.11	1.96	3.29	1.92	3.49	2.14	1.06	0.98	1.12	1.09
Taber	3.06	1.93	3.19	1.88	3.38	2.09	1.04	0.97	1.1	1.08
County 26 Lethbridge	3.05	1.94	3.19	1.88	3.41	2.1	1.04	0.97	1.11	1.08
Cardston	3.17	2.01	3.36	1.95	3.52	2.16	1.06	0.97	1.11	1.07
Willow Creek	3.16	2.04	3.25	1.93	3.44	2.13	1.03	0.94	1.09	1.04
Pincher Creek	3.24	2.09	3.31	1.94	3.44	2.11	1.02	0.93	1.06	1.01
Improvement District 6	3.43	2.24	3.28	1.95	3.41	2.11	0.95	0.87	0.99	0.94
Cold Lake Air Weapons Range	2.95	1.97	3.1	1.97	3.41	2.24	1.05	1	1.16	1.14
CFB Wainwright	3.34	2.21	3.7	2.31	3.98	2.57	1.11	1.05	1.19	1.16

Appendix B-4b: Annual spring wheat residue (t/ha) from wheat-fallow averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN$_{lp}$, SN$_l$).

Regional Municipalities	BL		SN$_l$		SN$_{lp}$		SN$_l$/BL		SN$_{lp}$/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	1.24	0.26	1.28	0.22	1.29	0.44	1.03	0.85	1.04	1.7
Improvement District 22	1.35	0.27	1.43	0.24	1.43	0.45	1.06	0.87	1.06	1.65
Improvement District 18	1.18	0.23	1.24	0.2	1.2	0.42	1.05	0.86	1.01	1.79
Improvement District 17	1.25	0.24	1.32	0.21	1.29	0.42	1.06	0.86	1.03	1.73
Improvement District 21	1.35	0.26	1.44	0.23	1.42	0.44	1.07	0.86	1.06	1.66
Improvement District 20	1.25	0.24	1.34	0.2	1.31	0.42	1.07	0.85	1.04	1.73
Fairview	1.36	0.25	1.47	0.23	1.44	0.44	1.08	0.9	1.06	1.75
Peace	1.34	0.26	1.44	0.22	1.43	0.43	1.07	0.87	1.06	1.71
Spirit River	1.4	0.25	1.53	0.23	1.47	0.44	1.09	0.92	1.05	1.78
Improvement District 19	1.31	0.24	1.42	0.22	1.38	0.42	1.09	0.91	1.05	1.79
Smoky River	1.32	0.24	1.42	0.22	1.39	0.43	1.07	0.88	1.05	1.76
County 1 Grande Prairie	1.38	0.25	1.5	0.23	1.42	0.43	1.09	0.89	1.03	1.71
Improvement District 16	1.22	0.23	1.26	0.19	1.2	0.41	1.03	0.83	0.99	1.75
Improvement District 15	1.16	0.23	1.21	0.19	1.18	0.41	1.04	0.82	1.02	1.78
County 12 Athabasca	1.15	0.22	1.2	0.19	1.12	0.4	1.04	0.86	0.97	1.85
County 11 Barrhead	1.21	0.22	1.26	0.19	1.2	0.4	1.05	0.85	0.99	1.84
Westlock	1.26	0.23	1.34	0.2	1.25	0.41	1.06	0.86	0.99	1.8
County 7 Thorhild	1.28	0.23	1.36	0.2	1.28	0.42	1.06	0.86	0.99	1.8
County 13 Smoky Lake	1.39	0.25	1.49	0.22	1.4	0.43	1.07	0.86	1.01	1.71
County 19 St. Paul	1.36	0.26	1.5	0.22	1.44	0.44	1.1	0.86	1.06	1.71
Bonnyville	1.22	0.24	1.31	0.2	1.26	0.43	1.07	0.85	1.03	1.78
County 21 Two Hills	1.57	0.28	1.75	0.24	1.67	0.45	1.11	0.88	1.06	1.63
County 24 Vermilion River	1.51	0.27	1.67	0.23	1.62	0.45	1.11	0.84	1.07	1.64
County 27 Minburn	1.55	0.27	1.69	0.23	1.59	0.44	1.09	0.88	1.03	1.67
County 9 Beaver	1.62	0.26	1.72	0.23	1.6	0.43	1.06	0.88	0.99	1.65
County 30 Lamont	1.79	0.29	1.88	0.25	1.75	0.45	1.05	0.87	0.98	1.57
ImprovementDistrict 13	1.67	0.27	1.75	0.23	1.63	0.44	1.05	0.86	0.98	1.63
County 20 Strathcona	1.47	0.24	1.56	0.21	1.47	0.42	1.06	0.85	1	1.75
Sturgeon	1.4	0.24	1.51	0.2	1.43	0.42	1.07	0.85	1.02	1.8
County 28 Lac Ste. Anne	1.18	0.21	1.23	0.18	1.17	0.4	1.04	0.84	0.99	1.88
County 31 Parkland	1.27	0.22	1.3	0.18	1.25	0.4	1.03	0.82	0.98	1.83
ImprovementDistrict 14	1.16	0.23	1.17	0.18	1.13	0.4	1	0.78	0.98	1.75
Clearwater	1.19	0.24	1.1	0.16	1.05	0.39	0.93	0.7	0.89	1.65
Brazeau	1.13	0.21	1.17	0.17	1.14	0.4	1.03	0.82	1.01	1.88
County 25 Leduc	1.36	0.23	1.41	0.19	1.33	0.41	1.03	0.84	0.98	1.8
County 10 Wetaskiwin	1.4	0.23	1.46	0.2	1.38	0.41	1.04	0.85	0.98	1.79
County 22 Camrose	1.53	0.25	1.61	0.22	1.48	0.42	1.05	0.86	0.97	1.7
County 3 Ponoka	1.33	0.23	1.4	0.2	1.33	0.41	1.05	0.85	1	1.79
County 29 Flagstaff	1.48	0.25	1.62	0.21	1.52	0.42	1.09	0.86	1.03	1.69
Wainwright	1.44	0.26	1.59	0.21	1.52	0.44	1.1	0.84	1.06	1.71
Provost	1.32	0.24	1.4	0.2	1.34	0.42	1.06	0.82	1.02	1.77
Special Area 4	1.28	0.22	1.34	0.19	1.32	0.41	1.05	0.83	1.03	1.86
Special Area 3	1.3	0.21	1.37	0.18	1.35	0.4	1.05	0.84	1.04	1.94
County 18 Paintearth	1.37	0.24	1.46	0.19	1.38	0.41	1.07	0.82	1.01	1.74
County 16 Stettler	1.4	0.23	1.49	0.19	1.39	0.41	1.07	0.83	1	1.75
County 14 Lacombe	1.4	0.24	1.46	0.2	1.37	0.42	1.05	0.82	0.98	1.74
County 17 Mountain View	1.34	0.24	1.36	0.18	1.28	0.4	1.01	0.77	0.96	1.69
Kneehill	1.5	0.25	1.56	0.2	1.48	0.41	1.04	0.81	0.99	1.65
Starland	1.45	0.24	1.55	0.19	1.47	0.41	1.07	0.81	1.01	1.73
Special Area 2	1.32	0.21	1.39	0.17	1.34	0.4	1.05	0.82	1.02	1.9
Acadia Valley	1.33	0.2	1.44	0.17	1.42	0.4	1.08	0.84	1.06	2
County 16 Wheatland	1.34	0.22	1.44	0.18	1.38	0.39	1.07	0.82	1.03	1.82
Rocky View	1.46	0.26	1.5	0.19	1.42	0.41	1.03	0.74	0.97	1.62
Bighorn	1.36	0.26	1.31	0.17	1.24	0.42	0.97	0.64	0.92	1.58
Improvement District 8	1.33	0.26	1.28	0.17	1.22	0.41	0.96	0.66	0.91	1.57

Appendix B-4b (Continued):

Regional Municipalities	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	1.43	0.29	1.28	0.17	1.19	0.33	0.9	0.59	0.83	1.13
Foothill	1.4	0.25	1.42	0.18	1.34	0.38	1.01	0.7	0.95	1.5
County 2 Vulcan	1.29	0.2	1.36	0.16	1.3	0.38	1.05	0.78	1.01	1.88
County 4 Newell	1.27	0.19	1.36	0.16	1.31	0.38	1.07	0.82	1.03	1.98
Cypress	1.31	0.2	1.44	0.16	1.4	0.39	1.1	0.83	1.07	2.01
Suffield	1.3	0.19	1.42	0.16	1.39	0.39	1.09	0.84	1.06	2.07
County 8 Forty Mile	1.3	0.19	1.43	0.16	1.38	0.38	1.1	0.83	1.06	2.03
County 5 Warner	1.27	0.19	1.36	0.15	1.31	0.38	1.07	0.8	1.03	2
Taber	1.22	0.18	1.32	0.14	1.28	0.37	1.08	0.8	1.05	2.06
County 26 Lethbridge	1.23	0.19	1.3	0.14	1.26	0.37	1.05	0.76	1.02	1.99
Cardston	1.25	0.2	1.32	0.15	1.23	0.36	1.05	0.74	0.98	1.8
Willow Creek	1.26	0.21	1.29	0.15	1.23	0.36	1.03	0.72	0.98	1.75
Pincher Creek	1.24	0.21	1.26	0.14	1.18	0.35	1.02	0.7	0.95	1.68
Improvement District 6	1.28	0.23	1.26	0.15	1.18	0.36	0.98	0.66	0.92	1.56
Cold Lake Air Weapons Range	1.19	0.23	1.27	0.2	1.22	0.42	1.07	0.87	1.02	1.82
CFB Wainwright	1.43	0.25	1.55	0.21	1.48	0.43	1.08	0.82	1.04	1.71

Appendix B-4c: Annual canola residue (t/ha) from canola-wheat-fallow averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Regional Municipalities	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	1.78	1.05	1.86	1.05	2	1.17	1.04	1	1.12	1.11
Improvement District 22	1.86	1.08	1.94	1.09	2.05	1.19	1.04	1.01	1.1	1.1
Improvement District 18	1.98	1.16	1.98	1.11	2.08	1.18	1	0.96	1.05	1.02
Improvement District 17	1.95	1.13	2.01	1.12	2.12	1.22	1.03	1	1.09	1.08
Improvement District 21	1.94	1.12	2.01	1.12	2.11	1.21	1.04	1	1.09	1.09
Improvement District 20	1.86	1.06	1.98	1.07	2.08	1.17	1.07	1.01	1.12	1.11
Fairview	1.9	1.08	1.94	1.08	2.07	1.19	1.03	1	1.09	1.1
Peace	1.89	1.08	1.96	1.1	2.04	1.19	1.03	1.01	1.08	1.1
Spirit River	1.83	1.03	1.91	1.04	2.05	1.16	1.04	1.01	1.12	1.12
Improvement District 19	1.83	1.04	1.92	1.06	2	1.15	1.05	1.02	1.09	1.11
Smoky River	1.87	1.06	1.95	1.08	2.02	1.19	1.04	1.02	1.08	1.12
County 1 Grande Prairie	1.78	1.01	1.94	1.05	2.1	1.16	1.09	1.04	1.18	1.16
Improvement District 16	1.76	1	1.96	1.06	2.15	1.21	1.11	1.06	1.22	1.21
Improvement District 15	1.9	1.11	2.04	1.14	2.16	1.27	1.07	1.02	1.14	1.14
County 12 Athabasca	2.02	1.19	1.97	1.08	2.12	1.19	0.97	0.91	1.05	1
County 11 Barrhead	2.07	1.2	2	1.12	2.14	1.19	0.97	0.93	1.03	0.99
Westlock	2.07	1.21	2	1.09	2.13	1.22	0.97	0.9	1.03	1.01
County 7 Thorhild	2.05	1.2	1.96	1.08	2.06	1.17	0.96	0.91	1.01	0.98
County 13 Smoky Lake	1.99	1.16	1.93	1.07	2.04	1.14	0.97	0.93	1.03	0.98
County 19 St. Paul	1.95	1.13	1.88	1.04	1.97	1.13	0.96	0.92	1.01	1
Bonnyville	1.92	1.11	1.83	1	1.94	1.14	0.95	0.9	1.01	1.02
County 21 Two Hills	1.89	1.08	1.81	1	1.97	1.13	0.96	0.93	1.04	1.05
County 24 Vermilion River	1.89	1.09	1.8	1.01	1.95	1.15	0.96	0.93	1.03	1.06
County 27 Minburn	1.91	1.1	1.85	1.02	1.99	1.15	0.97	0.93	1.04	1.05
County 9 Beaver	1.91	1.09	1.85	1.01	2	1.15	0.97	0.93	1.05	1.06
County 30 Lamont	1.95	1.12	1.87	1.03	2.03	1.16	0.96	0.92	1.04	1.03
Improvement District 13	1.96	1.12	1.86	1.03	2.01	1.14	0.95	0.92	1.03	1.02
County 20 Strathcona	1.99	1.14	1.87	1.03	1.98	1.12	0.94	0.91	1	0.99
Sturgeon	2.04	1.17	1.86	1.03	2.03	1.13	0.91	0.88	1	0.97
County 28 Lac Ste. Anne	2.07	1.2	2.01	1.12	2.13	1.21	0.97	0.93	1.03	1.01
County 31 Parkland	2.07	1.2	2.02	1.11	2.14	1.22	0.97	0.93	1.03	1.02
Improvement District 14	1.79	1.05	2.05	1.12	2.18	1.26	1.14	1.06	1.21	1.2
Clearwater	1.76	1.03	2	1.1	2.26	1.3	1.14	1.07	1.28	1.26
Brazeau	1.89	1.08	2.02	1.11	2.15	1.25	1.07	1.03	1.14	1.16
County 25 Leduc	2.02	1.16	1.95	1.07	2.07	1.17	0.96	0.93	1.02	1.01
County 10 Wetaskiwin	1.96	1.1	1.92	1.08	2.07	1.17	0.98	0.98	1.06	1.06
County 22 Camrose	1.88	1.06	1.84	1	2.02	1.16	0.98	0.94	1.07	1.09
County 3 Ponoka	1.95	1.11	1.92	1.06	2.08	1.18	0.99	0.95	1.06	1.06
County 29 Flagstaff	1.84	1.05	1.81	1	1.97	1.14	0.98	0.95	1.07	1.08
Wainwright	1.84	1.04	1.78	0.99	1.95	1.15	0.97	0.95	1.06	1.1
Provost	1.73	0.99	1.72	0.96	1.9	1.12	0.99	0.97	1.1	1.13
Special Area 4	1.6	0.92	1.66	0.95	1.89	1.11	1.04	1.03	1.18	1.2
Special Area 3	1.39	0.8	1.48	0.83	1.84	1.08	1.07	1.04	1.32	1.35
County 18 Paintearth	1.78	1	1.78	1.01	1.96	1.15	1	1	1.1	1.14
County 16 Stettler	1.78	0.99	1.79	1	1.95	1.12	1.01	1.01	1.1	1.12
County 14 Lacombe	1.89	1.07	1.91	1.08	2.1	1.19	1.01	1	1.11	1.11
County 17 Mountain View	1.86	1.06	1.9	1.07	2.11	1.21	1.02	1	1.14	1.14
Kneehill	1.8	1.02	1.74	0.99	1.92	1.12	0.97	0.97	1.06	1.1
Starland	1.71	0.96	1.68	0.95	1.88	1.12	0.98	0.99	1.1	1.16
Special Area 2	1.44	0.83	1.5	0.85	1.83	1.08	1.04	1.03	1.27	1.3
Acadia Valley	1.28	0.72	1.38	0.77	1.76	1.04	1.08	1.08	1.37	1.44
County 16 Wheatland	1.65	0.95	1.64	0.93	1.87	1.1	0.99	0.97	1.13	1.16
Rocky View	1.82	1.05	1.91	1.08	2.08	1.21	1.05	1.03	1.14	1.16
Bighorn	1.72	1.01	1.95	1.11	2.14	1.24	1.13	1.1	1.24	1.23
Improvement District 8	1.74	1.02	1.95	1.1	2.17	1.25	1.12	1.09	1.24	1.23

Appendix B-4c (Continued):

Regional Municipalities	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
ImprovementDistrict 5	1.62	0.95	1.98	1.11	2.16	1.25	1.23	1.17	1.34	1.31
Foothill	1.75	1	1.96	1.1	2.15	1.26	1.12	1.1	1.23	1.25
County 2 Vulcan	1.55	0.88	1.51	0.84	1.8	1.06	0.98	0.96	1.16	1.21
County 4 Newell	1.41	0.81	1.44	0.79	1.76	1.03	1.02	0.98	1.25	1.28
Cypress	1.34	0.77	1.45	0.79	1.76	1.03	1.08	1.03	1.31	1.33
Suffield	1.27	0.73	1.32	0.73	1.7	1	1.04	0.99	1.34	1.37
County 8 Forty Mile	1.35	0.76	1.46	0.78	1.73	1.01	1.08	1.03	1.28	1.33
County 5 Warner	1.41	0.8	1.53	0.83	1.77	1.05	1.09	1.04	1.25	1.31
Taber	1.37	0.76	1.39	0.73	1.67	0.97	1.01	0.97	1.22	1.28
County 26 Lethbridge	1.44	0.8	1.45	0.78	1.72	1.01	1.01	0.98	1.19	1.26
Cardston	1.55	0.87	1.73	0.94	1.92	1.1	1.12	1.08	1.23	1.27
Willow Creek	1.63	0.93	1.75	0.97	1.96	1.14	1.07	1.05	1.2	1.23
Pincher Creek	1.69	0.94	1.91	1.05	2.02	1.17	1.13	1.12	1.19	1.25
Improvement District 6	1.67	0.95	1.94	1.07	2.1	1.21	1.16	1.13	1.25	1.27
Cold Lake Air WeaponsRange	1.99	1.16	1.96	1.09	2.06	1.16	0.99	0.94	1.03	1
CFB Wainwright	1.83	1.04	1.76	0.99	1.95	1.14	0.96	0.95	1.07	1.09

Appendix B-4d: Annual wheat residue (t/ha) from canola-wheat-fallow averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Regional Municipalities	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	2.32	1.21	2.31	1.12	1.97	0.97	1	0.93	0.85	0.8
Improvement District 22	2.43	1.22	2.47	1.18	2.04	0.93	1.01	0.97	0.84	0.76
Improvement District 18	2.75	1.45	2.55	1.23	1.81	0.84	0.93	0.85	0.66	0.58
Improvement District 17	2.56	1.25	2.44	1.15	1.83	0.84	0.95	0.92	0.71	0.67
Improvement District 21	2.57	1.27	2.61	1.27	2.08	0.85	1.02	1	0.81	0.67
Improvement District 20	2.24	0.99	2.46	1.03	1.82	0.79	1.1	1.04	0.81	0.8
Fairview	2.46	1.15	2.48	1.16	1.92	0.86	1.01	1.01	0.78	0.74
Peace	2.58	1.31	2.73	1.33	2.04	0.98	1.06	1.01	0.79	0.75
Spirit River	2.24	0.92	2.4	1.04	1.73	0.81	1.07	1.13	0.77	0.88
Improvement District 19	2.34	1.07	2.64	1.3	1.88	0.97	1.13	1.21	0.8	0.9
Smoky River	2.48	1.15	2.71	1.31	2	0.98	1.09	1.14	0.8	0.85
County 1 Grande Prairie	2.01	0.86	2.42	1.03	1.72	0.8	1.2	1.2	0.86	0.92
Improvement District 16	1.77	0.83	2.13	0.94	1.68	0.76	1.2	1.13	0.95	0.92
Improvement District 15	2.19	1.05	2.27	1.05	1.75	0.81	1.03	1	0.8	0.77
County 12 Athabasca	2.85	1.52	2.42	1.15	1.61	0.73	0.85	0.76	0.57	0.48
County 11 Barrhead	2.91	1.44	2.46	1.13	1.71	0.77	0.85	0.79	0.59	0.53
Westlock	2.97	1.56	2.41	1.06	1.66	0.74	0.81	0.68	0.56	0.47
County 7 Thorhild	2.94	1.64	2.5	1.16	1.64	0.75	0.85	0.71	0.56	0.46
County 13 Smoky Lake	2.88	1.65	2.46	1.1	1.75	0.76	0.85	0.67	0.61	0.46
County 19 St. Paul	2.8	1.58	2.42	1.04	1.76	0.79	0.86	0.66	0.63	0.5
Bonnyville	2.68	1.5	2.46	1.17	1.73	0.78	0.92	0.78	0.65	0.52
County 21 Two Hills	2.75	1.5	2.22	0.97	1.68	0.81	0.81	0.65	0.61	0.54
County 24 Vermilion River	2.74	1.59	2.43	1.1	1.76	0.78	0.89	0.69	0.64	0.49
County 27 Minburn	2.78	1.53	2.43	1.02	1.66	0.77	0.87	0.66	0.6	0.51
County 9 Beaver	2.83	1.52	2.38	1.06	1.71	0.8	0.84	0.7	0.6	0.53
County 30 Lamont	2.94	1.65	2.34	1	1.78	0.89	0.8	0.6	0.61	0.54
ImprovementDistrict 13	2.95	1.64	2.34	1.03	1.73	0.83	0.79	0.63	0.59	0.51
County 20 Strathcona 3	1.68	2.48	1.13	1.65	0.76	0.83	0.67	0.55	0.45	
Sturgeon	3.05	1.7	2.13	0.91	1.67	0.72	0.7	0.54	0.55	0.43
County 28 Lac Ste. Anne	2.86	1.47	2.44	1.17	1.7	0.74	0.85	0.8	0.59	0.51
County 31 Parkland 3	1.61	2.75	1.35	1.97	0.89	0.91	0.84	0.66	0.55	
Improvement District 14	1.67	0.8	2.09	0.93	1.63	0.68	1.25	1.16	0.98	0.85
Clearwater	1.54	0.83	1.62	0.8	1.61	0.78	1.05	0.96	1.04	0.93
Brazeau	2.14	1.03	2.36	1.17	1.73	0.78	1.1	1.13	0.81	0.76
County 25 Leduc	2.96	1.58	2.49	1.23	1.73	0.79	0.84	0.78	0.59	0.5
County 10 Wetaskiwin	2.65	1.3	2.05	1.04	1.7	0.78	0.78	0.8	0.64	0.6
County 22 Camrose	2.72	1.41	1.93	0.91	1.68	0.78	0.71	0.65	0.62	0.56
County 3 Ponoka	2.69	1.41	2.19	0.99	1.7	0.77	0.81	0.7	0.63	0.55
County 29 Flagstaff	2.61	1.41	2.12	1.02	1.66	0.71	0.81	0.72	0.64	0.5
Wainwright	2.53	1.34	2.26	0.93	1.8	0.68	0.89	0.69	0.71	0.51
Provost	2.4	1.28	2.41	1.21	1.73	0.67	1.01	0.94	0.72	0.52
Special Area 4	2.2	1.26	2.42	1.35	1.75	0.68	1.1	1.07	0.8	0.54
Special Area 3	1.91	1.18	2.17	1.21	2.01	0.9	1.13	1.02	1.05	0.77
County 18 Paintearth	2.52	1.37	2.46	1.35	1.61	0.67	0.97	0.99	0.64	0.49
County 16 Stettler	2.47	1.28	2.13	1.07	1.58	0.67	0.86	0.84	0.64	0.53
County 14 Lacombe	2.51	1.28	2.06	0.95	1.72	0.78	0.82	0.74	0.69	0.61
County 17 Mountain View	2.2	1.2	2.25	1.12	1.86	0.86	1.02	0.93	0.85	0.71
Kneehill	2.61	1.45	2.32	1.25	1.77	0.83	0.89	0.86	0.68	0.57
Starland	2.48	1.3	2.09	1.14	1.65	0.73	0.84	0.87	0.66	0.56
Special Area 2	1.98	1.18	2.07	1.07	1.73	0.84	1.04	0.91	0.88	0.71
Acadia Valley	1.81	1.05	2.05	1.09	1.85	0.82	1.13	1.05	1.02	0.79
County 16 Wheatland	2.32	1.39	2.16	1.18	1.91	0.87	0.93	0.85	0.83	0.63
Rocky View	2.28	1.25	2.26	1.18	1.78	0.83	0.99	0.94	0.78	0.67
Bighorn	1.62	0.91	2.03	1.14	1.76	0.8	1.25	1.26	1.09	0.89
Improvement District 8	1.65	0.92	1.94	1.05	1.72	0.8	1.17	1.14	1.04	0.87

Appendix B-4d (Continued):

Regional Municipalities	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 5	1.46	0.84	1.88	0.93	1.62	0.79	1.29	1.11	1.11	0.95
Foothill	2	1.05	2.29	1.17	1.73	0.82	1.14	1.11	0.86	0.78
County 2 Vulcan	2.03	1.19	1.86	1.02	1.57	0.75	0.92	0.86	0.77	0.64
County 4 Newell	1.92	1.18	1.84	1	1.69	0.85	0.96	0.85	0.88	0.72
Cypress	1.68	1.02	1.93	1.01	1.57	0.71	1.15	0.99	0.94	0.7
Suffield	1.72	1.05	1.82	1	1.69	0.8	1.06	0.95	0.98	0.76
County 8 Forty Mile	1.63	0.99	1.85	1.02	1.54	0.68	1.13	1.02	0.95	0.69
County 5 Warner	1.67	0.94	1.82	0.96	1.43	0.63	1.09	1.02	0.85	0.67
Taber	1.78	1.06	1.76	0.92	1.42	0.69	0.99	0.87	0.8	0.65
County 26 Lethbridge	1.81	1.05	1.69	0.9	1.52	0.68	0.94	0.86	0.84	0.65
Cardston	1.62	0.89	1.7	0.85	1.56	0.72	1.05	0.96	0.96	0.81
Willow Creek	1.79	0.97	1.93	0.97	1.68	0.84	1.08	1	0.94	0.87
Pincher Creek	1.92	1.01	2	0.98	1.76	0.81	1.05	0.97	0.92	0.81
Improvement District 6	1.74	0.94	2.15	1.03	1.87	0.89	1.23	1.09	1.07	0.95
Cold Lake Air Weapons Range	2.84	1.58	2.61	1.3	1.95	0.9	0.92	0.83	0.69	0.57
CFB Wainwright	2.53	1.31	2.39	1.08	1.75	0.71	0.94	0.83	0.69	0.54

Appendix B-4e: Annual winter wheat residue (t/ha) from winter wheat-fallow averaged by Regional Municipalities in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_l).

Regional Municipalities	BL		SN_l		SN_{tp}		SN_l/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 23	1.18	0.94	1.4	1.24	1.54	1.26	1.19	1.31	1.31	1.33
Improvement District 22	1.36	1.14	1.52	1.34	1.67	1.41	1.12	1.18	1.23	1.24
Improvement District 18	1.24	1.06	2.15	1.47	2.12	1.59	1.74	1.39	1.71	1.5
Improvement District 17	1.39	1.12	1.97	1.48	2.15	1.76	1.41	1.33	1.55	1.57
Improvement District 21	1.4	1.21	1.65	1.36	1.67	1.44	1.18	1.12	1.19	1.18
Improvement District 20	1.32	1.17	1.73	1.34	1.71	1.39	1.31	1.15	1.3	1.19
Fairview	1.42	1.27	1.86	1.39	1.69	1.47	1.31	1.1	1.19	1.16
Peace	1.41	1.25	1.7	1.43	1.74	1.43	1.21	1.15	1.24	1.15
Spirit River	1.46	1.31	1.78	1.35	1.67	1.46	1.23	1.03	1.15	1.12
Improvement District 19	1.37	1.22	1.98	1.36	1.68	1.47	1.45	1.11	1.23	1.2
Smoky River	1.39	1.22	1.93	1.45	1.78	1.67	1.39	1.19	1.28	1.37
County 1 Grande Prairie	1.44	1.29	1.63	1.33	1.73	1.42	1.13	1.02	1.2	1.1
Improvement District 16	1.29	1.12	1.91	1.35	2.12	1.45	1.49	1.2	1.65	1.3
Improvement District 15	1.27	1.01	2.12	1.36	2.44	1.87	1.67	1.34	1.92	1.85
County 12 Athabasca	1.22	1.07	2.51	1.39	2.06	1.58	2.06	1.3	1.69	1.48
County 11 Barrhead	1.27	1.11	2.09	1.06	2.32	1.47	1.64	0.95	1.82	1.32
Westlock	1.33	1.17	2.26	1.17	2.3	1.62	1.7	0.99	1.73	1.38
County 7 Thorhild	1.33	1.19	2.6	1.32	2.25	1.62	1.95	1.11	1.69	1.36
County 13 Smoky Lake	1.45	1.29	2.1	1.53	1.95	1.66	1.44	1.18	1.34	1.29
County 19 St. Paul	1.42	1.26	2.22	1.39	2.01	1.63	1.57	1.1	1.41	1.29
Bonnyville	1.27	1.12	2.47	1.33	2.15	1.59	1.95	1.19	1.7	1.41
County 21 Two Hills	1.64	1.46	1.97	1.4	1.84	1.55	1.2	0.96	1.12	1.06
County 24 Vermilion River	1.56	1.4	2.29	1.3	2.02	1.52	1.47	0.93	1.3	1.09
County 27 Minburn	1.61	1.44	1.98	1.3	1.83	1.42	1.23	0.9	1.13	0.98
County 9 Beaver	1.68	1.51	1.87	1.33	1.87	1.44	1.11	0.88	1.11	0.95
County 30 Lamont	1.85	1.67	1.91	1.53	1.97	1.64	1.03	0.92	1.06	0.98
Improvement District 13	1.73	1.56	1.75	1.4	2.01	1.5	1.01	0.9	1.16	0.96
County 20 Strathcona	1.53	1.38	1.56	1.22	2.14	1.33	1.02	0.88	1.39	0.97
Sturgeon	1.46	1.31	1.79	1.19	1.99	1.36	1.23	0.91	1.36	1.04
County 28 Lac Ste. Anne	1.23	1.08	1.78	1.08	2.27	1.31	1.44	1	1.84	1.21
County 31 Parkland	1.32	1.17	1.43	1.03	1.66	1.2	1.08	0.88	1.26	1.02
Improvement District 14	1.35	1.16	2.25	1.18	2.41	1.67	1.68	1.01	1.79	1.44
Clearwater	1.75	1.41	2.09	1.38	2.12	1.62	1.2	0.98	1.21	1.15
Brazeau	1.28	1.07	1.9	1.07	1.79	1.41	1.49	1	1.4	1.32
County 25 Leduc	1.44	1.28	1.41	1.09	1.79	1.24	0.98	0.85	1.24	0.97
County 10 Wetaskiwin	1.54	1.32	1.52	1.15	1.66	1.35	0.98	0.87	1.07	1.02
County 22 Camrose	1.59	1.42	1.64	1.23	1.78	1.32	1.03	0.86	1.12	0.93
County 3 Ponoka	1.49	1.27	1.55	1.08	1.88	1.22	1.04	0.85	1.26	0.96
County 29 Flagstaff	1.55	1.4	1.76	1.23	1.73	1.34	1.13	0.88	1.11	0.96
Wainwright	1.48	1.33	2.19	1.2	2.06	1.33	1.48	0.9	1.39	1
Provost	1.34	1.2	1.66	1.05	1.69	1.19	1.24	0.87	1.26	0.99
Special Area 4	1.32	1.18	2.33	1	1.77	1.32	1.77	0.85	1.34	1.11
Special Area 3	1.32	1.17	2.43	1.01	2.01	1.27	1.84	0.86	1.52	1.08
County 18 Paintearth	1.45	1.3	1.52	1.1	1.55	1.24	1.05	0.85	1.07	0.96
County 16 Stettler	1.47	1.31	1.52	1.13	1.56	1.23	1.04	0.86	1.07	0.94
County 14 Lacombe	1.52	1.31	1.68	1.15	1.83	1.26	1.11	0.88	1.2	0.96
County 17 Mountain View	1.46	1.26	1.8	1.09	1.89	1.38	1.23	0.87	1.29	1.09
Kneehill	1.71	1.38	1.56	1.2	1.67	1.32	0.92	0.87	0.98	0.95
Starland	1.55	1.34	1.59	1.17	1.66	1.29	1.02	0.87	1.07	0.96
Special Area 2	1.4	1.18	2.07	1.03	1.99	1.2	1.48	0.87	1.42	1.01
Acadia Valley	1.34	1.19	1.69	1.07	1.61	1.21	1.26	0.9	1.2	1.02
County 16 Wheatland	1.94	1.32	1.51	1.09	1.69	1.2	0.78	0.82	0.87	0.9
Rocky View 2	1.62	1.57	1.18	1.66	1.3	0.79	0.73	0.83	0.8	
Bighorn	1.45	1.39	1.66	1.09	1.78	1.34	1.14	0.78	1.23	0.96

Appendix B-4e (Continued):

Regional Municipalities	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
	NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
Improvement District 8	1.54	1.4	1.76	1.12	1.86	1.37	1.14	0.8	1.21	0.97
Improvement District 5	1.88	1.66	1.47	1.04	1.78	1.16	0.78	0.63	0.95	0.7
Foothill	1.87	1.47	1.53	1.1	1.66	1.2	0.81	0.75	0.89	0.82
County 2 Vulcan	2.13	1.1	1.61	1.06	1.65	1.13	0.75	0.96	0.77	1.02
County 4 Newell	2.04	1.18	1.58	1.01	1.72	1.1	0.78	0.86	0.85	0.93
Cypress	1.85	1.13	1.69	1.09	1.71	1.19	0.91	0.97	0.93	1.06
Suffield	1.89	1.11	1.69	1.08	1.68	1.19	0.89	0.97	0.89	1.07
County 8 Forty Mile	2.35	1.07	1.77	1.1	1.78	1.19	0.76	1.03	0.76	1.11
County 5 Warner	2.38	1.01	1.84	1.12	1.77	1.17	0.77	1.1	0.74	1.16
Taber	2.84	1.21	1.7	1.06	1.78	1.13	0.6	0.87	0.63	0.93
County 26 Lethbridge	2.47	1	1.74	1.08	1.73	1.14	0.7	1.08	0.7	1.14
Cardston	1.78	1.03	1.76	1.11	1.75	1.16	0.99	1.09	0.98	1.13
Willow Creek	1.86	1.08	1.6	1.08	1.7	1.15	0.86	0.99	0.91	1.06
Pincher Creek	1.74	1.08	1.47	1.04	1.87	1.13	0.85	0.96	1.08	1.05
Improvement District 6	1.69	1.21	1.4	1.05	1.9	1.17	0.83	0.87	1.12	0.97
Cold Lake Air Weapons Range	1.25	1.1	2.49	1.47	2.28	1.54	1.99	1.33	1.82	1.4
CFB Wainwright	1.46	1.31	1.9	1.16	1.8	1.29	1.3	0.89	1.24	0.99

APPENDIX C

EPIC model outputs by Soil Landscape Polygones

Appendix C-1a: Annual wind erosion (t/ha) from continuous wheat averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_l).

Poly #	Soil name	BL		SN_l		SN_{tp}		SN_l/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	0.42	0.56	0.34	0.49	0.45	0.64	0.81	0.88	1.06	1.14
3	DON	0.64	0.79	0.51	0.62	0.54	0.72	0.8	0.78	0.84	0.91
4	HZM	0.89	1.11	0.72	0.83	0.71	0.92	0.81	0.75	0.8	0.84
5	DON	0.95	1.16	0.74	0.83	0.71	0.93	0.78	0.72	0.75	0.8
6	ESH	0.62	0.74	0.47	0.56	0.49	0.63	0.77	0.76	0.79	0.85
7	COS	0.7	0.89	0.58	0.71	0.6	0.81	0.83	0.79	0.86	0.91
9	BBN	1.75	2.18	1.59	1.61	1.22	1.56	0.91	0.74	0.7	0.72
10	BBN	2.15	2.58	1.72	1.7	1.32	1.73	0.8	0.66	0.61	0.67
11	ESH	1.52	1.79	1.15	1.17	0.93	1.21	0.75	0.65	0.61	0.68
13	HZM	2.1	2.5	1.7	1.73	1.44	1.61	0.81	0.69	0.68	0.64
14	COS	2.35	2.91	2.15	2.12	1.59	1.97	0.92	0.73	0.67	0.68
15	ABT	2.55	3.1	2.18	2.17	1.72	1.97	0.85	0.7	0.67	0.63
19	HZM	2.58	3.12	2.18	2.17	1.72	1.96	0.85	0.7	0.67	0.63
20	LAD	2.49	2.92	1.88	1.9	1.53	1.78	0.75	0.65	0.61	0.61
22	COS	2.61	3.03	1.86	1.92	1.74	1.63	0.71	0.63	0.67	0.54
27	DON	2.19	2.55	1.84	1.81	1.51	1.66	0.84	0.71	0.69	0.65
28	HZM	0.92	1.14	0.76	0.87	0.72	0.94	0.83	0.76	0.79	0.83
32	HRT	2.84	3.24	1.97	2.1	1.53	1.86	0.69	0.65	0.54	0.57
33	HRT	2.74	3.14	1.93	2.04	1.53	1.82	0.7	0.65	0.56	0.58
36	COS	2.5	2.87	1.87	1.92	1.43	1.74	0.75	0.67	0.57	0.61
47	DON	1.46	1.68	1.13	1.14	0.89	1.13	0.77	0.68	0.61	0.67
48	DON	2.04	2.35	1.49	1.51	1.18	1.5	0.73	0.64	0.58	0.64
49	TAG	2.29	2.64	1.65	1.69	1.3	1.63	0.72	0.64	0.56	0.62
51	SAD	2.38	2.75	1.67	1.66	1.31	1.76	0.7	[illegible]	0.55	0.64
52	VVW	2.48	2.86	1.78	1.82	1.4	1.75	0.72	0.64	0.57	0.61
53	TAG	2.63	3.03	1.88	1.96	1.51	1.78	0.72	0.65	0.58	0.59
54	ESH	2.21	2.55	1.52	1.49	1.2	1.64	0.69	0.58	0.54	0.64
56	ZBR	0.94	1.06	0.73	0.77	0.59	0.72	0.78	0.73	0.63	0.68
59	FAL	0.56	0.62	0.47	0.53	0.39	0.53	0.85	0.86	0.71	0.85
60	BBN	0.32	0.34	0.33	0.39	0.27	0.37	1.02	1.14	0.82	1.1
61	RYF	1.63	1.88	1.14	1.15	0.93	1.24	0.7	0.61	0.57	0.66
62	DVS	0.58	0.65	0.48	0.55	0.46	0.57	0.83	0.85	0.79	0.89
64	JUH	0.59	0.66	0.49	0.56	0.43	0.56	0.83	0.84	0.73	0.85
68	HRT	0.92	1.05	0.7	0.76	0.62	0.79	0.76	0.73	0.67	0.75
70	JUH	0.76	0.86	0.53	0.6	0.49	0.64	0.7	0.7	0.65	0.75
71	BBN	1.3	1.49	0.91	0.94	0.77	1.01	0.7	0.63	0.59	0.68
72	BLY	1.52	1.75	1.06	1.09	0.88	1.17	0.7	0.62	0.58	0.67
73	RYF	1.01	1.18	0.73	0.79	0.65	0.85	0.72	0.67	0.64	0.72
74	JUH	0.61	0.68	0.37	0.45	0.39	0.51	0.61	0.66	0.63	0.75
75	DIG	0.48	0.51	0.31	0.36	0.34	0.43	0.65	0.71	0.71	0.83
76	JUH	0.52	0.58	0.37	0.44	0.36	0.47	0.71	0.76	0.69	0.82
77	LAD	0.51	0.55	0.33	0.39	0.35	0.45	0.64	0.7	0.68	0.81
78	ABT	0.54	0.59	0.38	0.44	0.37	0.47	0.7	0.74	0.68	0.81
80	BWY	0.34	0.36	0.27	0.31	0.24	0.3	0.79	0.85	0.69	0.85
81	HZM	0.42	0.43	0.29	0.33	0.29	0.36	0.69	0.76	0.69	0.84
83	BUD	0.31	0.3	0.24	0.27	0.22	0.27	0.78	0.9	0.71	0.89
84	HZM	0.29	0.29	0.24	0.28	0.21	0.26	0.83	0.96	0.71	0.9
87	NPA	0.42	0.46	0.33	0.39	0.32	0.39	0.79	0.83	0.77	0.85
88	FAL	0.41	0.45	0.31	0.36	0.31	0.38	0.76	0.81	0.76	0.84
89	JUH	0.45	0.58	0.36	0.49	0.43	0.6	0.8	0.84	0.96	1.05
91	HZM	0.34	0.39	0.27	0.33	0.3	0.38	0.78	0.84	0.87	0.98
93	DON	0.43	0.48	0.34	0.4	0.33	0.4	0.8	0.84	0.78	0.83
94	HRT	0.47	0.49	0.3	0.34	0.33	0.41	0.64	0.7	0.71	0.84
97	FAL	0.42	0.44	0.37	0.43	0.29	0.39	0.88	0.98	0.69	0.9
98	HZM	0.36	0.35	0.35	0.39	0.23	0.29	0.97	1.1	0.65	0.83

Appendix C-1a (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	0.53	0.52	0.42	0.48	0.28	0.37	0.8	0.92	0.53	0.71
101	FAL	0.41	0.43	0.34	0.38	0.28	0.36	0.82	0.89	0.67	0.83
102	WHW	0.31	0.31	0.27	0.31	0.2	0.26	0.86	0.97	0.64	0.82
103	ABT	0.3	0.3	0.3	0.34	0.23	0.29	0.99	1.15	0.77	0.96
104	HZM	0.33	0.32	0.33	0.37	0.24	0.29	1	1.16	0.73	0.93
105	CTE	0.4	0.39	0.39	0.43	0.26	0.32	0.97	1.11	0.64	0.82
107	ALC	0.37	0.39	0.31	0.36	0.29	0.36	0.83	0.92	0.78	0.91
108	HZM	0.28	0.27	0.32	0.37	0.23	0.28	1.13	1.36	0.82	1.04
109	PRV	0.3	0.28	0.33	0.37	0.23	0.28	1.11	1.33	0.77	0.98
110	CTE	0.42	0.4	0.42	0.46	0.26	0.32	1.01	1.17	0.62	0.81
112	ALC	0.33	0.32	0.36	0.41	0.25	0.3	1.11	1.3	0.76	0.96
130	DVS	0.05	0.05	0.05	0.06	0.04	0.05	1.05	1.2	0.7	1
132	CTE	0.06	0.05	0.05	0.06	0.04	0.05	0.94	1.1	0.74	0.92
133	BBN	0.41	0.44	0.38	0.43	0.28	0.38	0.92	0.99	0.7	0.86
135	DVS	0.43	0.47	0.39	0.45	0.31	0.43	0.9	0.95	0.73	0.9
144	BBN	0.39	0.49	0.43	0.48	0.38	0.47	1.12	1	0.98	0.96
170	HUB	0.07	0.09	0.13	0.16	0.11	0.15	1.8	1.74	1.49	1.64
171	HUB	0.19	0.22	0.28	0.32	0.22	0.28	1.48	1.47	1.15	1.28
172	KTH	0.1	0.12	0.12	0.16	0.14	0.17	1.26	1.3	1.43	1.46
173	CUL	0.08	0.09	0.09	0.11	0.11	0.13	1.17	1.26	1.39	1.45
176	HRT	0.29	0.36	0.32	0.41	0.42	0.51	1.12	1.16	1.46	1.43
177	HRT	0.28	0.33	0.39	0.44	0.37	0.46	1.36	1.32	1.3	1.39
178	HPE	0.42	0.45	0.51	0.48	0.46	0.56	1.23	1.07	1.1	1.23
180	KNZ	0.39	0.43	0.6	0.54	0.47	0.56	1.55	1.25	1.21	1.28
181	COS	0.4	0.45	0.77	0.65	0.53	0.6	1.95	1.44	1.33	1.34
182	ATO	0.41	0.43	0.44	0.43	0.44	0.55	1.08	0.99	1.09	1.27
185	UCS	0.4	0.43	0.38	0.41	0.43	0.54	0.95	0.95	1.07	1.25
189	CUL	0.31	0.37	0.35	0.43	0.43	0.52	1.16	1.17	1.41	1.39
192	COA	0.19	0.23	0.2	0.25	0.26	0.32	1.05	1.11	1.36	1.37
193	MLA	0.14	0.16	0.12	0.14	0.16	0.19	0.84	0.89	1.11	1.17
194	MLA	0.37	0.41	0.33	0.4	0.4	0.49	0.91	0.96	1.08	1.2
196	LNN	0.45	0.46	0.33	0.35	0.43	0.55	0.74	0.77	0.96	1.21
197	COA	0.48	0.52	0.37	0.44	0.4	0.51	0.76	0.85	0.82	0.99
198	COA	0.29	0.33	0.27	0.33	0.34	0.41	0.94	0.99	1.18	1.25
201	HRT	0.03	0.04	0.03	0.05	0.04	0.05	1.04	1.28	1.27	1.38
211	ZOR	0.47	0.53	0.91	0.76	0.56	0.64	1.93	1.42	1.2	1.19
212	ABC	0.54	0.6	0.86	0.76	0.51	0.59	1.6	1.26	0.95	0.98
215	ABC	0.55	0.62	0.96	0.82	0.59	0.67	1.73	1.32	1.07	1.09
218	KNZ	0.7	0.76	1.18	0.92	0.72	0.79	1.7	1.2	1.03	1.04
221	EGL	0.38	0.43	0.62	0.48	0.32	0.39	1.64	1.1	0.85	0.9
224	ABC	0.46	0.52	0.77	0.59	0.42	0.49	1.68	1.14	0.91	0.95
227	TNW	0.7	0.77	1.18	0.88	0.68	0.74	1.68	1.14	0.96	0.96
231	ABC	0.74	0.8	1.18	0.91	0.69	0.77	1.6	1.13	0.94	0.96
232	MLA	0.7	0.76	1.31	0.96	0.74	0.79	1.89	1.26	1.06	1.04
233	KNZ	0.63	0.69	1.16	0.86	0.66	0.71	1.84	1.25	1.04	1.03
236	ABC	0.33	0.37	0.55	0.42	0.3	0.34	1.67	1.15	0.91	0.93
240	KNZ	0.6	0.66	1.03	0.79	0.59	0.65	1.72	1.2	0.98	0.99
246	GDI	0.33	0.37	0.49	0.36	0.24	0.27	1.48	0.98	0.72	0.73
248	GDI	0.38	0.42	0.48	0.35	0.23	0.27	1.26	0.84	0.61	0.64
250	ABC	0.51	0.56	0.63	0.48	0.34	0.4	1.24	0.85	0.67	0.72
252	UCS	0.51	0.55	0.68	0.6	0.53	0.64	1.31	1.09	1.04	1.16
253	COD	0.57	0.61	0.64	0.58	0.52	0.64	1.12	0.96	0.92	1.06
254	PIB	0.55	0.58	0.48	0.49	0.49	0.62	0.86	0.86	0.88	1.08
258	POK	1.41	1.44	1.37	1.63	1.05	1.37	0.97	1.14	0.75	0.95
259	RDW	0.89	0.95	0.9	0.93	0.67	0.85	1.01	0.98	0.75	0.9
261	NIT	0.98	1.05	1.01	1	0.69	0.87	1.03	0.95	0.71	0.83
264	COA	0.81	0.9	0.88	0.72	0.53	0.64	1.09	0.8	0.65	0.71
268	KNZ	0.75	0.83	1.01	0.81	0.61	0.7	1.35	0.97	0.8	0.84

Appendix C-1a (Continued):

Poly #	Soil name	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
271	FLU	0.88	0.94	0.93	0.85	0.6	0.73	1.05	0.9	0.68	0.78
275	RDW	0.84	0.89	0.89	0.69	0.49	0.58	1.07	0.78	0.59	0.65
279	ABC	0.65	0.7	0.75	0.55	0.4	0.48	1.16	0.78	0.63	0.68
290	ABC	0.33	0.38	0.55	0.41	0.23	0.27	1.63	1.07	0.69	0.71
291	LCY	0.62	0.73	1.37	1.01	0.51	0.59	2.22	1.38	0.82	0.81
292	TMN	0.88	0.99	1.62	1.28	0.75	0.86	1.85	1.29	0.85	0.86
296	NIT	1.58	1.7	1.32	1.01	0.65	0.76	0.84	0.59	0.41	0.45
297	GOG	0.87	0.98	1.34	0.99	0.55	0.64	1.54	1.01	0.63	0.65
301	SDN	1.25	1.34	1.05	0.8	0.54	0.63	0.84	0.6	0.44	0.47
302	LCY	1.48	1.57	1.13	0.89	0.62	0.72	0.76	0.56	0.42	0.45
306	LCY	0.63	0.69	0.68	0.48	0.37	0.43	1.08	0.7	0.59	0.63
310	FRY	1.19	1.25	1.12	0.78	0.56	0.62	0.95	0.62	0.47	0.5
311	FRY	0.92	0.98	0.95	0.66	0.47	0.55	1.03	0.67	0.52	0.56
312	FRY	1.21	1.28	1.19	0.75	0.55	0.62	0.98	0.59	0.45	0.48
315	NTW	1.04	1.08	1.04	0.97	0.8	0.9	1	0.9	0.77	0.83
316	LCY	0.95	0.98	0.83	0.84	0.77	0.84	0.87	0.85	0.81	0.86
317	LCY	0.98	1.08	1.21	0.99	0.67	0.76	1.23	0.92	0.68	0.7
320	FRY	0.92	1	0.84	0.75	0.63	0.68	0.91	0.74	0.68	0.67
322	LCY	0.57	0.63	0.55	0.57	0.48	0.54	0.97	0.89	0.85	0.85
323	LCY	0.6	0.66	0.57	0.58	0.5	0.55	0.96	0.87	0.83	0.83
325	LCY	0.77	0.83	0.71	0.65	0.52	0.57	0.92	0.77	0.67	0.69
326	LCY	1.24	1.31	0.98	0.8	0.58	0.65	0.79	0.61	0.47	0.5
334	LCY	0.88	0.91	0.89	0.68	0.51	0.54	1.01	0.75	0.58	0.59
335	FRY	0.61	0.67	0.6	0.58	0.45	0.51	0.97	0.87	0.73	0.76
337	MGS	0.47	0.49	0.37	0.37	0.3	0.37	0.79	0.76	0.65	0.76
339	LFN	0.43	0.45	0.34	0.34	0.28	0.34	0.78	0.76	0.63	0.76
341	MGS	0.55	0.59	0.53	0.5	0.39	0.44	0.96	0.85	0.71	0.75
342	LFN	0.56	0.58	0.58	0.54	0.41	0.44	1.04	0.94	0.74	0.77
343	FRY	0.54	0.54	0.58	0.54	0.42	0.43	1.09	1	0.78	0.8
344	BSU	0.43	0.45	0.44	0.37	0.29	0.32	1.03	0.83	0.68	0.71
345	SDN	0.39	0.41	0.42	0.33	0.26	0.28	1.08	0.8	0.66	0.68
346	PHS	0.66	0.68	0.69	0.56	0.42	0.44	1.04	0.82	0.64	0.65
347	SDN	1.01	1.05	1.01	0.64	0.46	0.5	1	0.61	0.46	0.47
348	SDN	1.07	1.12	1.04	0.7	0.51	0.55	0.97	0.63	0.48	0.5
350	LFN	0.85	0.89	1.02	0.62	0.39	0.41	1.2	0.69	0.46	0.46
351	LFN	0.5	0.53	0.59	0.4	0.28	0.3	1.17	0.76	0.55	0.56
352	RDW	0.34	0.37	0.49	0.34	0.23	0.24	1.44	0.91	0.67	0.66
354	BVH	0.37	0.37	0.25	0.25	0.21	0.28	0.67	0.69	0.56	0.76
356	EOR	0.6	0.66	0.56	0.57	0.47	0.56	0.94	0.86	0.79	0.86
357	EOR	0.46	0.5	0.42	0.41	0.34	0.4	0.91	0.81	0.73	0.8
359	RED	0.51	0.57	0.52	0.5	0.43	0.44	1.01	0.87	0.83	0.76
360	EOR	0.44	0.49	0.45	0.42	0.35	0.37	1.01	0.86	0.8	0.76
362	EOR	0.54	0.6	0.64	0.58	0.46	0.52	1.18	0.96	0.85	0.87
363	EOR	0.64	0.75	0.76	0.76	0.71	0.81	1.2	1.02	1.11	1.09
364	EOR	0.87	1.12	1.03	1.04	1.45	1.62	1.18	0.93	1.66	1.44
365	HND	0.92	1.15	1.12	1.18	1.33	1.5	1.22	1.03	1.45	1.31
366	DCY	0.81	0.98	0.94	1	0.98	1.13	1.16	1.02	1.22	1.15
367	HND	0.76	0.92	0.88	0.94	0.9	1.02	1.15	1.01	1.17	1.1
370	HND	1.36	1.71	1.76	1.96	1.63	2	1.3	1.15	1.2	1.17
371	WWT	1.29	1.55	1.44	1.56	1.26	1.49	1.11	1.01	0.97	0.96
372	EOR	0.89	1.04	1.01	1.07	0.88	0.99	1.13	1.03	0.99	0.95
374	EOR	0.81	0.93	0.84	0.87	0.71	0.82	1.03	0.94	0.87	0.89
375	WWT	1.17	1.37	1.23	1.31	1.04	1.23	1.05	0.95	0.89	0.9
376	HND	1.5	1.78	1.54	1.66	1.29	1.53	1.03	0.93	0.86	0.86
378	HND	1.61	1.94	1.47	1.61	1.23	1.49	0.91	0.83	0.76	0.77
392	AGS	1.09	1.15	1.08	0.73	0.52	0.58	0.99	0.64	0.47	0.51
393	LIZ	0.66	0.68	0.66	0.62	0.45	0.54	1.01	0.9	0.69	0.79

Appendix C-1a (Continued):

Poly #	Soil name	BL		SN_t		$SN_{\blacktriangledown}$		SN/BL		$SN_{\blacktriangledown}$/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
396	AGS	0.98	1.02	0.92	1.07	0.69	0.88	0.94	1.05	0.71	0.86
401	MGS	2.09	2.1	2.05	2.55	1.55	2.03	0.98	1.22	0.74	0.97
403	CMO	0.56	0.58	0.56	0.54	0.38	0.46	1	0.92	0.68	0.8
404	AGS	0.49	0.51	0.49	0.44	0.34	0.4	1	0.86	0.7	0.78
405	CMO	0.82	0.86	0.82	0.61	0.44	0.5	1	0.71	0.53	0.59
408	AGS	0.51	0.53	0.56	0.42	0.29	0.33	1.1	0.79	0.56	0.63
409	AGS	0.45	0.48	0.38	0.39	0.31	0.36	0.85	0.81	0.69	0.75
410	UCS	0.75	0.78	0.72	0.75	0.49	0.62	0.96	0.96	0.66	0.79
411	COA	0.68	0.77	0.6	0.68	0.42	0.54	0.88	0.88	0.63	0.7
412	CMO	0.4	0.41	0.39	0.34	0.29	0.34	0.97	0.84	0.72	0.82
416	WKN	2.18	2.17	2.1	2.68	1.62	2.13	0.96	1.23	0.74	0.98
418	MMO	0.96	1	0.83	1.02	0.69	0.91	0.86	1.02	0.72	0.91
420	TBY	0.66	0.71	0.45	0.59	0.44	0.59	0.68	0.83	0.67	0.83
421	HND	1.59	1.96	2.22	2.52	2.17	2.49	1.4	1.29	1.36	1.27
422	HCH	3.08	3.61	4.51	4.82	3.67	4.23	1.47	1.34	1.19	1.17
423	LET	4.25	4.9	6.17	6.46	4.73	5.44	1.45	1.32	1.11	1.11
425	HND	2.39	2.86	3.62	4.2	3.4	3.78	1.51	1.47	1.42	1.32
426	MMO	0.94	0.99	0.81	1.01	0.67	0.87	0.86	1.02	0.71	0.87
428	HND	3.02	3.74	4.97	5.73	4.72	5.38	1.65	1.53	1.56	1.44
429	FLU	0.54	0.65	0.44	0.5	0.33	0.41	0.81	0.78	0.61	0.63
430	MCO	0.51	0.57	0.4	0.46	0.35	0.41	0.78	0.8	0.68	0.72
431	AGS	0.48	0.53	0.35	0.41	0.37	0.41	0.72	0.77	0.77	0.78
432	KVG	0.48	0.53	0.32	0.39	0.38	0.45	0.66	0.73	0.79	0.85
433	POK	0.42	0.47	0.25	0.32	0.3	0.38	0.61	0.68	0.73	0.8
435	BTN	0.42	0.46	0.19	0.25	0.46	0.53	0.45	0.55	1.1	1.16
437	POK	0.44	0.47	0.26	0.32	0.39	0.44	0.6	0.68	0.9	0.94
439	COA	0.68	0.72	0.62	0.68	0.45	0.56	0.92	0.94	0.66	0.78
440	COA	0.57	0.63	0.31	0.46	0.35	0.48	0.54	0.73	0.6	0.75
441	MMO	1.09	1.13	0.93	1.19	0.77	1.02	0.85	1.05	0.71	0.9
442	WTB	0.48	0.54	0.31	0.39	0.32	0.42	0.63	0.72	0.66	0.78
443	HND	1.72	2.1	2.48	2.89	2.51	2.79	1.44	1.38	1.46	1.33
444	MET	1.28	1.64	1.87	2.18	2.33	2.5	1.45	1.33	1.82	1.53
449	KUR	4.89	6.19	8.23	9.25	7.95	8.81	1.68	1.49	1.63	1.42
451	MET	4.05	5.17	6.94	8.34	7.28	8.12	1.71	1.61	1.79	1.57
452	LET	4.78	6.29	8.3	9.65	8.73	9.58	1.74	1.53	1.83	1.52
453	CHN	3.48	4.25	5.73	7.09	5.87	6.7	1.64	1.67	1.68	1.58
457	MAB	3.37	3.88	4.72	6.15	4.69	5.5	1.4	1.59	1.39	1.42
458	MAB	3.93	4.51	4.62	6.03	4.46	5.23	1.17	1.34	1.13	1.16
460	WDN	3.67	4.2	4.56	5.99	4.46	5.24	1.24	1.43	1.22	1.25
461	BVL	3.26	3.77	4.7	6.11	4.7	5.51	1.44	1.62	1.44	1.46
463	HND	2.66	3	4.39	5.86	4.5	5.34	1.65	1.95	1.69	1.78
466	HND	4.18	5.38	7.16	8.53	7.54	8.38	1.71	1.59	1.81	1.56
467	WWT	4.72	6.19	8.2	9.44	8.48	9.32	1.74	1.53	1.8	1.51
471	HUK	3.6	4.54	5.97	7.19	6.15	6.96	1.66	1.58	1.71	1.53
472	MAB	4.27	4.88	4.78	6.01	4.28	4.98	1.12	1.23	1	1.02
473	HND	3.19	3.82	4.92	6.22	5.08	5.85	1.54	1.63	1.59	1.53
474	MAB	3.73	4.35	4.78	6.11	4.67	5.42	1.28	1.41	1.25	1.25
475	BVL	3.56	4.18	4.58	5.87	4.65	5.33	1.28	1.4	1.31	1.28
476	MAB	4.16	4.79	4.9	5.99	4.32	4.96	1.18	1.25	1.04	1.04
478	CCL	3.02	3.61	4.41	5.68	4.81	5.49	1.46	1.57	1.6	1.52
480	HUK	2.85	3.64	4.99	5.93	4.78	5.67	1.75	1.63	1.67	1.56
481	YTW	2.63	3.4	4.83	5.7	4.47	5.42	1.84	1.67	1.7	1.59
484	WWT	2.23	2.83	3.77	4.37	3.68	4.28	1.69	1.55	1.65	1.51
486	YTW	2.59	3.27	4.31	5.1	4.16	4.93	1.67	1.56	1.61	1.51
487	HUK	5.3	6.39	6.07	7.44	5.56	6.39	1.14	1.16	1.05	1
489	HUK	3.56	4.43	4.84	5.83	4.63	5.56	1.36	1.31	1.3	1.26
494	LHD	1.75	2.22	2.76	3.25	3.1	3.39	1.58	1.47	1.77	1.53

Appendix C-1a (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
496	MET	2.6	3.26	4.01	4.67	3.69	4.71	1.54	1.43	1.42	1.44
499	CVD	10.73	13.76	11.78	14.4	10.95	12.31	1.1	1.05	1.02	0.89
508	AGS	0.45	0.49	0.31	0.36	0.38	0.42	0.67	0.73	0.84	0.86
509	PHS	0.39	0.42	0.21	0.26	0.39	0.43	0.53	0.61	0.99	1.01
510	AGS	0.42	0.44	0.32	0.36	0.38	0.44	0.77	0.82	0.9	1
512	BVH	0.53	0.58	0.39	0.47	0.48	0.55	0.73	0.8	0.9	0.94
513	AGS	0.45	0.48	0.31	0.36	0.38	0.43	0.7	0.75	0.86	0.89
514	PHS	0.47	0.53	0.34	0.43	0.42	0.5	0.73	0.81	0.89	0.95
515	BVH	0.57	0.68	0.5	0.65	0.57	0.67	0.89	0.96	1.01	1
516	BVH	0.43	0.47	0.31	0.4	0.35	0.41	0.72	0.84	0.81	0.87
517	FLU	0.38	0.38	0.19	0.23	0.22	0.27	0.5	0.61	0.6	0.72
518	MGS	0.36	0.39	0.24	0.29	0.3	0.34	0.66	0.76	0.84	0.88
519	NVR	0.42	0.44	0.27	0.31	0.33	0.35	0.64	0.71	0.79	0.8
520	AGS	0.39	0.42	0.24	0.29	0.33	0.35	0.61	0.69	0.83	0.85
521	POK	0.35	0.38	0.21	0.25	0.35	0.39	0.59	0.67	1.01	1.02
523	PED	0.45	0.5	0.41	0.52	0.38	0.42	0.9	1.04	0.83	0.85
524	FLU	0.27	0.31	0.21	0.25	0.31	0.33	0.79	0.81	1.15	1.06
531	GDB	0.79	0.97	0.87	0.99	1.06	1.19	1.1	1.03	1.33	1.23
532	HKR	1.56	1.98	2.39	2.78	2.63	2.92	1.53	1.41	1.69	1.48
533	HND	1.73	2.16	2.69	2.93	2.54	2.99	1.55	1.36	1.47	1.38
534	MET	1.74	2.08	2.63	2.73	2.16	2.68	1.51	1.31	1.24	1.29
536	HND	1.51	1.77	2.1	2.16	1.69	2.09	1.39	1.22	1.12	1.18
537	BVH	0.87	1.08	1.04	1.18	1.14	1.3	1.2	1.09	1.32	1.21
538	HND	1.33	1.54	1.63	1.84	1.43	1.65	1.23	1.2	1.08	1.07
539	PHS	0.76	0.98	0.93	1.05	1.11	1.27	1.21	1.08	1.45	1.3
540	KLM	0.87	1.14	1.11	1.24	1.36	1.53	1.27	1.09	1.56	1.34
543	EOR	1.07	1.21	1.17	1.44	1.11	1.25	1.1	1.19	1.04	1.03
545	IRM	0.86	0.99	0.86	1.1	0.84	0.95	1	1.11	0.98	0.96
547	DEL	0.98	1.09	0.98	1.24	0.87	0.95	1	1.13	0.89	0.87
548	BVH	0.78	0.9	0.73	0.92	0.67	0.75	0.93	1.02	0.86	0.84
549	FLU	0.49	0.56	0.42	0.55	0.44	0.51	0.86	0.97	0.9	0.91
551	FLU	0.78	0.86	0.73	0.92	0.58	0.64	0.94	1.06	0.74	0.74
553	ATL	1.13	1.24	1.04	1.22	0.63	0.64	0.92	0.99	0.56	0.52
554	ATL	1.78	1.99	1.36	1.58	1.12	1.31	0.76	0.8	0.63	0.66
555	CYG	0.67	0.72	0.66	0.86	0.45	0.52	0.98	1.19	0.66	0.71
558	DEL	2.24	2.51	1.62	1.86	1.42	1.72	0.72	0.74	0.63	0.68
559	ATL	1.19	1.36	0.98	1.33	1.01	1.22	0.82	0.98	0.85	0.89
561	ATL	1.19	1.33	0.92	1.15	0.81	0.93	0.78	0.87	0.68	0.7
562	BGH	2.14	2.46	1.53	1.87	1.45	1.74	0.72	0.76	0.68	0.71
563	BSK	1.41	1.56	1.19	1.38	0.75	0.78	0.84	0.88	0.53	0.5
564	LET	22.48	27.39	13.79	22.18	10.75	17.64	0.61	0.81	0.48	0.64
565	DEL	2.42	2.74	1.71	1.97	1.52	1.82	0.71	0.72	0.63	0.66
566	DEL	4.27	5.05	2.61	3.25	2.76	3.29	0.61	0.64	0.65	0.65
567	BSK	3.37	3.85	2.46	3.01	2.22	2.35	0.73	0.78	0.66	0.61
568	DEL	1.47	1.64	1.41	1.78	1.28	1.35	0.96	1.09	0.87	0.82
569	IRM	2.06	2.31	1.77	2.18	1.49	1.52	0.86	0.94	0.72	0.66
570	HAN	3.02	3.43	2.55	3.18	2.25	2.17	0.84	0.93	0.74	0.63
571	HAN	2.17	2.56	3.01	3.15	2.34	2.95	1.39	1.23	1.08	1.15
572	DVG	5.46	7.01	3.91	5.77	2.84	4.44	0.72	0.82	0.52	0.63
574	LET	4.71	5.35	3.72	4.64	3.2	2.85	0.79	0.87	0.68	0.53
575	WWT	7.14	8.33	4.53	5.78	4.76	5.4	0.63	0.69	0.67	0.65
576	DMH	4.3	4.96	3.55	4.35	3.23	3.39	0.83	0.88	0.75	0.68
577	BZR	9.62	11.6	6.93	10.1	4.59	7.16	0.72	0.87	0.48	0.62
578	HAN	4.09	4.82	3.65	4.38	3.38	3.95	0.89	0.91	0.83	0.82
579	LET	7.15	8.33	4.72	6	4.82	5.34	0.66	0.72	0.67	0.64
581	HKR	2.45	3.05	3.55	4.04	3.32	3.97	1.45	1.32	1.36	1.3
582	HAN	2.49	3.01	3.27	3.64	2.82	3.42	1.31	1.21	1.13	1.14

Appendix C-1a (Continued):

Poly #	Soil name	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
583	HAN	2.6	3.17	3.49	3.95	3.08	3.73	1.34	1.25	1.18	1.18
584	DMH	2.21	2.56	2.66	2.89	2.13	2.57	1.21	1.13	0.97	1
589	HAN	2.79	3.38	3.51	4.01	3.13	3.78	1.26	1.19	1.12	1.12
590	CHN	4.35	4.89	4.12	5.53	3.83	4.53	0.95	1.13	0.88	0.93
591	BVL	4.76	5.39	4.71	6.03	4.09	4.84	0.99	1.12	0.86	0.9
592	FMT	5.28	6.01	5.03	6.45	4.27	5.14	0.95	1.07	0.81	0.85
593	CVD	4.97	5.64	4.88	6.14	4.01	4.8	0.98	1.09	0.81	0.85
595	ATP	4.06	4.68	4.06	5.13	3.08	4.01	1	1.1	0.76	0.86
596	FMT	4.89	5.54	3.76	4.89	3.19	4.21	0.77	0.88	0.65	0.76
598	FMT	5.06	5.74	3.82	4.98	3.28	4.32	0.75	0.87	0.65	0.75
599	MAB	6.95	7.92	6.05	7.99	5.21	6.26	0.87	1.01	0.75	0.79
600	CVD	6.31	6.97	4.9	6.42	4.02	5.19	0.78	0.92	0.64	0.74
601	MAB	6.34	7.36	6.16	7.65	5.2	6.07	0.97	1.04	0.82	0.82
602	MAB	7.02	8.1	6.41	8.24	5.54	6.51	0.91	1.02	0.79	0.8
603	MAB	8.25	9.48	5.65	7.94	5.18	6.98	0.69	0.84	0.63	0.74
605	HDY	7.94	9.13	6.12	7.95	5.42	6.59	0.77	0.87	0.68	0.72
606	CVD	9.18	11.24	8.95	10.99	8.12	9.22	0.98	0.98	0.88	0.82
607	CVD	8.07	10.03	8.06	9.91	7.51	8.63	1	0.99	0.93	0.86
608	MCT	6.89	8.27	5.84	7.31	5.54	6.58	0.85	0.88	0.8	0.79
609	TIY	7.87	8.96	6.29	7.58	5.3	5.99	0.8	0.85	0.67	0.67
610	BVL	9.91	11.74	6.47	9.04	6.24	8.28	0.65	0.77	0.63	0.71
611	HUK	7.55	8.74	5.45	6.95	5.14	6.2	0.72	0.79	0.68	0.71
613	CCL	5.63	6.59	3.99	5.18	3.96	4.94	0.71	0.79	0.7	0.75
615	CVD	13.77	17.06	8.37	12.46	7.92	11.21	0.61	0.73	0.57	0.66
616	CHN	8.97	10.89	5.73	8.19	5.34	7.1	0.64	0.75	0.6	0.65
617	FMT	6.65	7.61	4.59	6.16	3.68	5.13	0.69	0.81	0.55	0.67
618	CHN	5.98	6.59	4.33	5.65	3.35	4.62	0.72	0.86	0.56	0.7
619	FMT	5.44	6.21	3.98	5.2	3.3	4.48	0.73	0.84	0.61	0.72
620	MAB	5.57	6.53	4.62	5.96	3.67	4.82	0.83	0.91	0.66	0.74
621	TTH	5.2	6.33	4.85	6.15	4.16	5.27	0.93	0.97	0.8	0.83
622	TTH	5.32	6.48	5.03	6.36	4.21	5.3	0.94	0.98	0.79	0.82
623	ZRB	5.2	6.39	5.23	6.6	4.3	5.37	1.01	1.03	0.83	0.84
624	THA	4.75	6.13	5.46	6.78	4.86	5.86	1.15	1.11	1.02	0.96
626	SIL	5.65	6.54	5.13	6.6	3.25	4.4	0.91	1.01	0.57	0.67
627	MAB	6.04	7	5.09	6.58	3.45	4.64	0.84	0.94	0.57	0.66
628	BVL	6.87	7.92	5.16	6.76	3.68	5	0.75	0.85	0.54	0.63
629	SIL	6.32	7.24	4.96	6.43	3.43	4.63	0.79	0.89	0.54	0.64
631	MAB	7.12	7.94	4.47	5.83	3.29	4.55	0.63	0.73	0.46	0.57
632	MAB	9.46	11.03	6.04	7.95	4.01	5.55	0.64	0.72	0.42	0.5
633	MAB	11.93	14.5	7.89	10.79	5.77	8.1	0.66	0.74	0.48	0.56
634	MAB	7.89	8.89	5.01	6.6	3.67	5.02	0.64	0.74	0.47	0.57
635	MAB	8.92	10.26	5.6	7.44	4.07	5.62	0.63	0.73	0.46	0.55
637	MSN	11.82	14.4	8	10.87	5.72	8.01	0.68	0.75	0.48	0.56
638	ZRB	9.35	10.85	5.9	7.88	4.23	5.86	0.63	0.73	0.45	0.54
639	PUR	13.65	17	9.55	13.27	7.73	10.74	0.7	0.78	0.57	0.63
641	MAB	13.5	16.69	8.54	12.16	7.03	9.97	0.63	0.73	0.52	0.6
642	MAB	10.67	13.38	6.59	9.58	6.25	8.17	0.62	0.72	0.59	0.61
643	CHN	18.93	23.69	11.29	16.81	10.14	14.96	0.6	0.71	0.54	0.63
645	DLB	13.7	16.98	9.87	13.76	7.77	11.03	0.72	0.81	0.57	0.65
648	CFD	12.85	15.73	7.87	11.98	8.05	11.48	0.61	0.76	0.63	0.73
649	BVL	11.98	14.41	7.65	10.71	6.98	10.02	0.64	0.74	0.58	0.7
650	MAB	10.11	12.01	6.31	8.81	6.05	8.35	0.62	0.73	0.6	0.7
651	RDM	7.59	8.71	4.17	5.66	4.83	6	0.55	0.65	0.64	0.69
653	LET	10.57	12.41	5.63	7.9	6.83	8.58	0.53	0.64	0.65	0.69
654	PUY	5.5	6.46	3.9	5.05	3.92	4.88	0.71	0.78	0.71	0.76
655	DEL	6.12	7.27	3.38	4.54	3.98	4.89	0.55	0.63	0.65	0.67
656	PUY	11.07	13.24	5.98	9.1	6.57	8.82	0.54	0.69	0.59	0.67

Appendix C-1a (Continued):

Poly #	Soil name	BL		SN_l		SN_w		SN_l/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
657	LET	16.89	20.63	9.96	16.04	8.55	13.23	0.59	0.78	0.51	0.64
658	CMY	19.23	23.47	10.75	18.49	9.51	14.6	0.56	0.79	0.49	0.62
659	DEL	4.55	5.53	2.52	3.53	2.82	3.55	0.55	0.64	0.62	0.64
660	CVD	6.43	7.57	4.79	6.13	4.72	5.74	0.75	0.81	0.73	0.76
661	RDM	10	11.8	5.86	8.4	5.88	8.03	0.59	0.71	0.59	0.68
663	LET	17.04	20.75	9.88	15.96	8.79	13.33	0.58	0.77	0.52	0.64
664	RDM	12.79	15.29	7.13	10.84	7.32	10.19	0.56	0.71	0.57	0.67
666	PUR	12.92	16.06	8.96	12.53	7.26	10.17	0.69	0.78	0.56	0.63
667	LET	20.53	25.59	13.03	19.25	10.85	16.38	0.63	0.75	0.53	0.64
669	LOB	0.63	0.68	0.51	0.63	0.39	0.44	0.81	0.93	0.62	0.65
671	PHS	0.84	0.92	0.76	0.92	0.48	0.5	0.9	1	0.57	0.55
672	PED	0.76	0.83	0.71	0.89	0.48	0.52	0.93	1.08	0.62	0.63
673	MMO	0.57	0.61	0.55	0.71	0.38	0.43	0.96	1.15	0.66	0.71
675	BTN	0.33	0.36	0.3	0.37	0.28	0.31	0.91	1.02	0.87	0.86
676	CYG	0.29	0.33	0.26	0.32	0.3	0.32	0.9	0.96	1.01	0.95
677	BEN	0.53	0.58	0.51	0.66	0.37	0.42	0.96	1.15	0.69	0.73
680	PNC	0.16	0.18	0.16	0.19	0.13	0.14	0.96	1.05	0.78	0.79
681	CYG	0.41	0.44	0.38	0.48	0.28	0.32	0.93	1.07	0.68	0.72
682	BEN	0.24	0.26	0.22	0.27	0.18	0.21	0.92	1.04	0.76	0.78
683	HUB	0.18	0.2	0.13	0.17	0.21	0.24	0.75	0.83	1.19	1.19
684	CAR	0.1	0.11	0.1	0.12	0.09	0.1	1	1.05	0.94	0.92
686	LOB	0.39	0.42	0.32	0.4	0.26	0.31	0.83	0.95	0.67	0.72
689	CAR	0.07	0.08	0.07	0.09	0.08	0.09	0.96	1.03	1.14	1.11
690	RMY	0.25	0.28	0.23	0.28	0.22	0.24	0.9	1.02	0.85	0.86
691	HUB	0.07	0.08	0.07	0.09	0.09	0.1	1.02	1.1	1.28	1.27
692	BTN	0.13	0.15	0.11	0.13	0.15	0.17	0.85	0.93	1.17	1.14
693	RMY	0.23	0.27	0.2	0.23	0.27	0.29	0.84	0.87	1.15	1.06
694	HUB	0.25	0.28	0.16	0.2	0.28	0.32	0.65	0.73	1.14	1.14
695	BTN	0.33	0.36	0.15	0.2	0.38	0.44	0.46	0.56	1.18	1.22
696	BTN	0.26	0.3	0.15	0.2	0.23	0.29	0.6	0.68	0.9	0.96
698	MYW	0.16	0.19	0.14	0.18	0.13	0.18	0.88	0.96	0.84	0.94
699	HUB	0.27	0.31	0.16	0.2	0.19	0.24	0.57	0.64	0.69	0.77
702	CVL	0.38	0.44	0.21	0.28	0.26	0.34	0.55	0.64	0.67	0.77
703	HGV	0.37	0.41	0.21	0.27	0.23	0.3	0.57	0.65	0.63	0.73
705	MCO	0.4	0.43	0.19	0.24	0.17	0.23	0.48	0.55	0.42	0.52
708	MLA	0.25	0.27	0.14	0.17	0.16	0.2	0.58	0.63	0.66	0.74
709	COA	0.21	0.23	0.16	0.17	0.21	0.25	0.73	0.74	0.98	1.06
710	COA	0.43	0.47	0.26	0.35	0.3	0.39	0.61	0.74	0.7	0.83
711	COA	0.33	0.36	0.22	0.27	0.26	0.32	0.66	0.75	0.79	0.9
715	KVG	0.48	0.52	0.31	0.42	0.35	0.46	0.65	0.8	0.72	0.88

Appendix C-1b: Annual wind erosion (t/ha) from wheat-fallow averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Poly #	Soil name	BL		SN_t		SN_{tp}		SN/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	0.35	0.93	0.26	0.88	0.3	0.71	0.75	0.95	0.84	0.77
3	DON	0.47	1.15	0.37	0.98	0.36	0.83	0.77	0.85	0.77	0.72
4	HZM	0.65	1.55	0.51	1.21	0.48	1.06	0.79	0.78	0.74	0.68
5	DON	0.67	1.58	0.52	1.22	0.49	1.09	0.77	0.77	0.73	0.69
6	ESH	0.43	0.98	0.33	0.84	0.33	0.72	0.76	0.86	0.76	0.74
7	COS	0.53	1.33	0.43	1.13	0.41	0.94	0.81	0.85	0.78	0.71
9	BBN	1.25	3.06	1.14	2.21	0.91	1.89	0.91	0.72	0.72	0.62
10	BBN	1.48	3.4	1.24	2.48	1.02	2.21	0.84	0.73	0.68	0.65
11	ESH	1.02	2.32	0.83	1.75	0.71	1.55	0.81	0.75	0.7	0.67
13	HZM	1.38	3.25	1.23	2.42	0.97	2.05	0.89	0.75	0.7	0.63
14	COS	1.66	4.03	1.55	2.86	1.18	2.44	0.94	0.71	0.71	0.61
15	ABT	1.72	4.12	1.58	2.96	1.21	2.49	0.92	0.72	0.7	0.6
19	HZM	1.73	4.14	1.58	2.97	1.21	2.5	0.91	0.72	0.7	0.6
20	LAD	1.61	3.69	1.36	2.7	1.1	2.32	0.85	0.73	0.68	0.63
22	COS	1.58	3.67	1.35	2.75	1.06	2.22	0.86	0.75	0.67	0.61
27	DON	1.42	3.1	1.39	2.52	1	2.14	0.98	0.81	0.71	0.69
28	HZM	0.67	1.64	0.56	1.32	0.5	1.11	0.83	0.81	0.76	0.68
32	HRT	1.72	3.92	1.4	2.8	1.19	2.4	0.82	0.71	0.69	0.61
33	HRT	1.68	3.83	1.38	2.76	1.16	2.36	0.82	0.72	0.69	0.62
36	COS	1.56	3.48	1.37	2.61	1.09	2.24	0.88	0.75	0.7	0.64
47	DON	0.95	2.1	0.82	1.68	0.67	1.47	0.86	0.8	0.7	0.7
48	DON	1.31	2.9	1.08	2.19	0.9	1.94	0.82	0.76	0.68	0.67
49	TAG	1.46	3.24	1.2	2.41	1	2.12	0.82	0.74	0.68	0.65
51	SAD	1.58	3.43	1.22	2.55	1.04	2.33	0.77	0.74	0.66	0.68
52	VVW	1.58	3.55	1.29	2.6	1.08	2.28	0.81	0.73	0.68	0.64
53	TAG	1.63	3.71	1.35	2.7	1.12	2.31	0.83	0.73	0.69	0.62
54	ESH	1.48	3.16	1.11	2.38	0.96	2.19	0.75	0.75	0.65	0.69
56	ZBR	0.59	1.29	0.53	1.12	0.43	0.93	0.89	0.87	0.73	0.72
59	FAL	0.37	0.76	0.32	0.75	0.28	0.65	0.86	0.99	0.75	0.85
60	BBN	0.24	0.42	0.2	0.49	0.17	0.43	0.85	1.16	0.71	1.03
61	RYF	1.07	2.33	0.82	1.79	0.73	1.62	0.77	0.77	0.68	0.7
62	DVS	0.33	0.68	0.31	0.72	0.31	0.61	0.92	1.06	0.92	0.9
64	JUH	0.37	0.74	0.32	0.75	0.3	0.64	0.89	1.01	0.82	0.86
68	HRT	0.57	1.22	0.48	1.07	0.44	0.93	0.84	0.87	0.78	0.76
70	JUH	0.47	1.03	0.38	0.9	0.37	0.78	0.79	0.87	0.78	0.76
71	BBN	0.85	1.87	0.66	1.46	0.59	1.31	0.77	0.78	0.7	0.7
72	BLY	1	2.18	0.77	1.68	0.68	1.52	0.77	0.77	0.68	0.7
73	RYF	0.68	1.55	0.53	1.21	0.49	1.06	0.78	0.78	0.72	0.69
74	JUH	0.39	0.89	0.28	0.75	0.3	0.65	0.72	0.85	0.78	0.74
75	DIG	0.31	0.63	0.24	0.59	0.26	0.5	0.78	0.93	0.83	0.79
76	JUH	0.32	0.68	0.26	0.66	0.27	0.56	0.82	0.97	0.84	0.83
77	LAD	0.33	0.7	0.25	0.63	0.27	0.54	0.76	0.9	0.82	0.78
78	ABT	0.34	0.71	0.27	0.67	0.28	0.57	0.82	0.94	0.82	0.8
80	BWY	0.21	0.4	0.19	0.45	0.18	0.36	0.93	1.13	0.84	0.91
81	HZM	0.26	0.51	0.22	0.52	0.22	0.43	0.85	1.02	0.85	0.84
83	BUD	0.19	0.34	0.18	0.43	0.16	0.33	0.95	1.27	0.88	0.99
84	HZM	0.18	0.32	0.18	0.42	0.16	0.32	1	1.34	0.89	1.02
87	NPA	0.28	0.55	0.22	0.58	0.23	0.47	0.8	1.06	0.82	0.84
88	FAL	0.27	0.52	0.21	0.55	0.22	0.44	0.8	1.07	0.84	0.85
89	JUH	0.36	0.9	0.27	0.84	0.29	0.69	0.74	0.93	0.8	0.76
91	HZM	0.28	0.56	0.18	0.55	0.2	0.46	0.66	0.99	0.72	0.83
93	DON	0.28	0.55	0.22	0.59	0.23	0.46	0.78	1.07	0.82	0.84
94	HRT	0.3	0.6	0.23	0.56	0.25	0.48	0.78	0.93	0.84	0.8
97	FAL	0.26	0.5	0.25	0.6	0.2	0.49	0.93	1.2	0.76	0.98
98	HZM	0.22	0.44	0.25	0.65	0.18	0.44	1.14	1.47	0.83	1

Appendix C-1b (Continued):

Poly #	Soil name	BL		SN_i		SN_φ		SN_i/BL		SN_φ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	0.29	0.59	0.31	0.77	0.21	0.58	1.05	1.31	0.72	0.98
101	FAL	0.24	0.48	0.24	0.56	0.2	0.44	0.97	1.18	0.82	0.93
102	WHW	0.19	0.34	0.2	0.46	0.15	0.34	1.05	1.35	0.81	1.01
103	ABT	0.19	0.33	0.22	0.5	0.18	0.37	1.14	1.52	0.95	1.1
104	HZM	0.2	0.36	0.23	0.55	0.18	0.39	1.17	1.54	0.92	1.09
105	CTE	0.24	0.45	0.28	0.69	0.2	0.46	1.17	1.53	0.83	1.03
107	ALC	0.24	0.48	0.22	0.55	0.21	0.43	0.91	1.16	0.86	0.9
108	HZM	0.18	0.3	0.23	0.53	0.18	0.36	1.28	1.76	1.02	1.2
109	PRV	0.19	0.32	0.24	0.56	0.18	0.37	1.27	1.75	0.97	1.15
110	CTE	0.25	0.46	0.31	0.75	0.21	0.48	1.23	1.62	0.83	1.04
112	ALC	0.21	0.36	0.26	0.62	0.2	0.41	1.26	1.71	0.95	1.13
130	DVS	0.04	0.06	0.04	0.1	0.03	0.07	1.07	1.65	0.74	1.11
132	CTE	0.03	0.06	0.04	0.11	0.03	0.07	1.07	1.67	0.89	1.13
133	BBN	0.27	0.64	0.26	0.78	0.21	0.59	0.96	1.22	0.78	0.93
135	DVS	0.3	0.65	0.26	0.72	0.23	0.59	0.87	1.09	0.75	0.9
144	BBN	0.32	0.95	0.32	1	0.3	0.82	1.01	1.05	0.96	0.86
170	HUB	0.06	0.21	0.11	0.29	0.08	0.2	1.83	1.4	1.36	0.96
171	HUB	0.17	0.43	0.2	0.58	0.16	0.45	1.2	1.36	0.95	1.05
172	KTH	0.08	0.21	0.1	0.25	0.1	0.2	1.3	1.15	1.33	0.91
173	CUL	0.06	0.16	0.07	0.18	0.08	0.14	1.28	1.14	1.36	0.9
176	HRT	0.2	0.56	0.27	0.53	0.3	0.44	1.35	0.95	1.51	0.78
177	HRT	0.23	0.56	0.3	0.75	0.26	0.62	1.27	1.32	1.12	1.09
178	HPE	0.27	0.82	0.42	1.07	0.33	0.88	1.55	1.31	1.23	1.08
180	KNZ	0.28	0.77	0.5	1.11	0.34	0.87	1.79	1.45	1.21	1.13
181	COS	0.3	0.83	0.65	1.3	0.37	0.96	2.12	1.58	1.22	1.17
182	ATO	0.25	0.77	0.36	0.98	0.32	0.85	1.41	1.28	1.29	1.1
185	UCS	0.24	0.77	0.31	0.89	0.32	0.78	1.25	1.16	1.29	1.02
189	CUL	0.21	0.59	0.3	0.6	0.31	0.49	1.38	1.02	1.46	0.84
192	COA	0.13	0.36	0.16	0.36	0.19	0.31	1.22	1.01	1.4	0.86
193	MLA	0.09	0.22	0.09	0.22	0.11	0.21	0.99	1.01	1.24	0.95
194	MLA	0.23	0.69	0.27	0.74	0.29	0.64	1.15	1.07	1.25	0.92
196	LNN	0.25	0.83	0.26	0.96	0.32	0.89	1.04	1.15	1.28	1.07
197	COA	0.29	0.9	0.28	0.99	0.3	0.84	0.96	1.1	1.01	0.93
198	COA	0.19	0.53	0.21	0.55	0.25	0.48	1.14	1.04	1.31	0.91
201	HRT	0.02	0.07	0.03	0.08	0.03	0.06	1.15	1.17	1.29	0.85
211	ZOR	0.33	0.9	0.76	1.47	0.4	1.07	2.28	1.63	1.21	1.19
212	ABC	0.34	0.87	0.7	1.4	0.38	1.06	2.09	1.6	1.12	1.21
215	ABC	0.36	1	0.8	1.58	0.43	1.19	2.21	1.58	1.2	1.19
218	KNZ	0.43	1.28	1.01	1.89	0.55	1.52	2.36	1.47	1.29	1.18
221	EGL	0.25	0.56	0.51	0.88	0.26	0.69	2.06	1.59	1.06	1.25
224	ABC	0.29	0.72	0.64	1.12	0.34	0.89	2.18	1.55	1.14	1.24
227	TNW	0.42	1.26	1.01	1.84	0.53	1.47	2.39	1.47	1.26	1.17
231	ABC	0.44	1.36	1	1.91	0.54	1.52	2.28	1.4	1.24	1.12
232	MLA	0.42	1.23	1.13	1.92	0.58	1.58	2.69	1.56	1.38	1.29
233	KNZ	0.39	1.1	1	1.71	0.52	1.4	2.59	1.55	1.34	1.27
236	ABC	0.21	0.57	0.46	0.84	0.24	0.66	2.18	1.46	1.13	1.14
240	KNZ	0.36	1.1	0.87	1.59	0.46	1.27	2.4	1.46	1.27	1.16
246	GDI	0.24	0.56	0.41	0.73	0.19	0.54	1.7	1.29	0.78	0.95
248	GDI	0.29	0.63	0.38	0.7	0.18	0.51	1.28	1.12	0.6	0.81
250	ABC	0.38	0.89	0.48	0.95	0.27	0.71	1.27	1.07	0.71	0.8
252	UCS	0.32	1.02	0.55	1.34	0.39	1.09	1.72	1.32	1.22	1.07
253	COD	0.33	1.1	0.52	1.37	0.4	1.12	1.54	1.24	1.19	1.02
254	PIB	0.31	1.08	0.37	1.23	0.37	1.06	1.19	1.14	1.17	0.98
258	POK	0.78	3.27	0.97	3.26	0.81	2.58	1.24	1	1.04	0.79
259	RDW	0.51	1.9	0.68	2.05	0.52	1.58	1.35	1.08	1.02	0.83
261	NIT	0.56	2.09	0.77	2.25	0.54	1.68	1.39	1.08	0.97	0.8
264	COA	0.46	1.57	0.72	1.84	0.42	1.28	1.55	1.17	0.9	0.82

Appendix C-1b (Continued):

Poly #	Soil name	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	0.44	1.44	0.85	1.84	0.48	1.38	1.9	1.28	1.08	0.96
271	FLU	0.54	1.76	0.73	1.88	0.49	1.4	1.33	1.07	0.89	0.8
275	RDW	0.61	1.4	0.72	1.4	0.41	1.05	1.18	1	0.67	0.75
279	ABC	0.49	1.09	0.57	1.1	0.32	0.81	1.18	1.01	0.67	0.75
290	ABC	0.25	0.61	0.45	0.81	0.17	0.55	1.76	1.34	0.69	0.9
291	LCY	0.46	1.29	1.11	1.98	0.38	1.22	2.43	1.53	0.82	0.95
292	TMN	0.61	1.85	1.3	2.74	0.53	1.88	2.14	1.48	0.87	1.02
296	NIT	1.32	2.33	1.1	1.95	0.5	1.52	0.84	0.84	0.38	0.65
297	GOG	0.68	1.56	1.09	1.94	0.41	1.27	1.59	1.24	0.6	0.82
301	SDN	1.03	1.84	0.86	1.53	0.41	1.2	0.84	0.84	0.4	0.66
302	LCY	1.22	2.15	0.94	1.72	0.46	1.37	0.77	0.8	0.38	0.64
306	LCY	0.5	0.99	0.5	0.93	0.28	0.69	1.01	0.94	0.56	0.7
310	FRY	0.97	1.64	0.98	1.47	0.45	1.06	1.01	0.9	0.46	0.65
311	FRY	0.73	1.39	0.79	1.31	0.4	0.97	1.09	0.94	0.55	0.7
312	FRY	1.01	1.66	1.06	1.5	0.46	1.1	1.05	0.9	0.46	0.66
315	NTW	0.69	1.94	0.8	2.41	0.53	2.01	1.16	1.24	0.78	1.03
316	LCY	0.61	1.78	0.63	2.15	0.49	1.81	1.03	1.21	0.79	1.02
317	LCY	0.73	1.77	0.98	2.12	0.46	1.53	1.35	1.2	0.63	0.87
320	FRY	0.69	1.57	0.7	1.63	0.39	1.19	1.02	1.03	0.56	0.76
322	LCY	0.38	1.04	0.44	1.06	0.29	0.8	1.16	1.02	0.77	0.77
323	LCY	0.4	1.09	0.46	1.12	0.3	0.84	1.14	1.04	0.75	0.78
325	LCY	0.56	1.28	0.57	1.26	0.34	0.93	1.01	0.98	0.59	0.73
326	LCY	1	1.83	0.8	1.52	0.42	1.19	0.8	0.83	0.42	0.65
334	LCY	0.68	1.27	0.72	1.21	0.38	0.82	1.06	0.96	0.56	0.65
335	FRY	0.43	1.04	0.46	1	0.3	0.77	1.08	0.96	0.7	0.74
337	MGS	0.29	0.76	0.27	0.72	0.21	0.67	0.91	0.94	0.72	0.87
339	LFN	0.27	0.71	0.24	0.66	0.19	0.63	0.9	0.94	0.71	0.89
341	MGS	0.38	0.91	0.39	0.87	0.26	0.67	1.04	0.96	0.7	0.74
342	LFN	0.38	0.9	0.42	0.91	0.28	0.63	1.1	1.01	0.74	0.7
343	FRY	0.36	0.86	0.4	0.89	0.28	0.58	1.12	1.03	0.79	0.68
344	BSU	0.31	0.68	0.33	0.65	0.2	0.49	1.06	0.96	0.66	0.72
345	SDN	0.29	0.61	0.32	0.59	0.18	0.43	1.1	0.96	0.63	0.71
346	PHS	0.49	0.99	0.53	0.97	0.3	0.66	1.09	0.98	0.62	0.67
347	SDN	0.83	1.36	0.91	1.25	0.38	0.9	1.09	0.92	0.45	0.66
348	SDN	0.87	1.46	0.92	1.32	0.41	0.95	1.05	0.91	0.47	0.65
350	LFN	0.71	1.2	0.92	1.26	0.33	0.85	1.3	1.05	0.47	0.71
351	LFN	0.4	0.76	0.49	0.78	0.22	0.55	1.24	1.02	0.54	0.73
352	RDW	0.26	0.58	0.4	0.66	0.17	0.47	1.51	1.14	0.65	0.8
354	BVH	0.22	0.58	0.16	0.54	0.15	0.59	0.75	0.93	0.72	1.01
356	EOR	0.35	1.01	0.35	1	0.38	0.87	0.98	1	1.09	0.87
357	EOR	0.28	0.79	0.27	0.76	0.25	0.68	0.96	0.96	0.87	0.86
359	RED	0.31	0.98	0.3	0.9	0.26	0.72	0.99	0.92	0.84	0.73
360	EOR	0.27	0.82	0.28	0.76	0.22	0.61	1.01	0.93	0.8	0.75
362	EOR	0.37	1.08	0.42	1.06	0.3	0.93	1.14	0.99	0.82	0.86
363	EOR	0.43	1.4	0.5	1.4	0.46	1.29	1.15	1	1.08	0.92
364	EOR	0.61	2.08	0.69	2.09	0.95	2.05	1.13	1	1.55	0.99
365	HND	0.62	2.14	0.75	2.2	0.88	2.08	1.22	1.03	1.42	0.97
366	DCY	0.51	1.81	0.61	1.82	0.66	1.68	1.19	1	1.28	0.93
367	HND	0.48	1.69	0.57	1.69	0.59	1.54	1.17	1	1.23	0.91
370	HND	0.89	3.14	1.18	3.29	1.17	3.1	1.33	1.05	1.31	0.99
371	WWT	0.79	2.62	0.95	2.8	0.86	2.34	1.19	1.07	1.08	0.89
372	EOR	0.53	1.81	0.62	1.87	0.58	1.55	1.17	1.03	1.09	0.86
374	EOR	0.49	1.49	0.53	1.55	0.52	1.28	1.08	1.04	1.07	0.86
375	WWT	0.71	2.18	0.79	2.37	0.73	1.92	1.12	1.09	1.03	0.88
376	HND	0.91	2.82	1.01	3.09	0.86	2.43	1.11	1.09	0.96	0.86
378	HND	0.95	2.99	0.97	3.14	0.82	2.41	1.03	1.05	0.86	0.81
392	AGS	0.88	1.58	0.95	1.47	0.45	1.08	1.08	0.93	0.52	0.68

Appendix C-1b (Continued):

Poly #	Soil name	BL		SN_t		SN_{ψ}		SN/BL		SN_{ψ}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	0.43	1.25	0.49	1.29	0.42	0.97	1.15	1.03	0.99	0.78
396	AGS	0.58	2.14	0.62	2.05	0.55	1.6	1.06	0.96	0.93	0.75
401	MGS	1.15	5.07	1.41	4.88	1.2	3.87	1.23	0.96	1.05	0.76
403	CMO	0.37	1.09	0.41	1.09	0.35	0.82	1.12	1	0.96	0.76
404	AGS	0.33	0.89	0.35	0.93	0.35	0.69	1.08	1.03	1.07	0.77
405	CMO	0.63	1.28	0.69	1.23	0.39	0.9	1.1	0.96	0.63	0.71
408	AGS	0.39	0.82	0.47	0.82	0.24	0.59	1.22	1	0.61	0.72
409	AGS	0.32	0.83	0.29	0.73	0.24	0.55	0.9	0.87	0.75	0.66
410	UCS	0.48	1.52	0.52	1.46	0.4	1.11	1.08	0.96	0.83	0.73
411	COA	0.46	1.33	0.36	1.21	0.3	0.9	0.79	0.91	0.66	0.68
412	CMO	0.28	0.65	0.3	0.63	0.2	0.47	1.08	0.97	0.72	0.73
416	WKN	1.19	5.33	1.42	5.08	1.24	4.05	1.2	0.95	1.05	0.76
418	MMO	0.55	2.07	0.59	2.11	0.53	1.68	1.08	1.02	0.96	0.81
420	TBY	0.4	1.24	0.34	1.34	0.33	1.09	0.84	1.08	0.83	0.88
421	HND	1.04	3.74	1.51	4.35	1.45	3.8	1.46	1.16	1.4	1.02
422	HCH	2.06	6.47	3.1	8	2.46	6.5	1.51	1.24	1.19	1
423	LET	2.84	8.5	4.26	10.7	3.16	8.37	1.5	1.26	1.11	0.98
425	HND	1.57	5.54	2.46	7.22	2.18	5.9	1.57	1.3	1.39	1.06
426	MMO	0.55	2.07	0.54	1.95	0.5	1.55	0.98	0.94	0.92	0.75
428	HND	2.06	7.52	3.29	9.64	2.92	8.13	1.6	1.28	1.42	1.08
429	FLU	0.38	0.98	0.23	0.85	0.21	0.61	0.6	0.87	0.56	0.63
430	MCO	0.35	0.95	0.25	0.82	0.25	0.62	0.71	0.86	0.7	0.65
431	AGS	0.33	0.92	0.24	0.75	0.27	0.58	0.73	0.82	0.83	0.64
432	KVG	0.31	0.86	0.21	0.71	0.25	0.6	0.68	0.83	0.82	0.7
433	POK	0.25	0.72	0.16	0.59	0.21	0.5	0.64	0.82	0.85	0.7
435	BTN	0.26	0.65	0.14	0.48	0.26	0.53	0.55	0.74	1.02	0.81
437	POK	0.28	0.76	0.19	0.6	0.26	0.53	0.66	0.79	0.91	0.7
439	COA	0.44	1.35	0.43	1.27	0.34	0.97	0.98	0.94	0.78	0.72
440	COA	0.36	1.02	0.23	1.06	0.26	0.86	0.64	1.04	0.74	0.84
441	MMO	0.62	2.44	0.63	2.36	0.59	1.89	1.02	0.97	0.94	0.77
442	WTB	0.28	0.9	0.2	0.81	0.25	0.66	0.72	0.89	0.9	0.73
443	HND	1.11	4.12	1.71	5.05	1.63	4.27	1.54	1.23	1.47	1.04
444	MET	0.8	3.5	1.34	3.86	1.46	3.42	1.67	1.1	1.82	0.98
449	KUR	3.37	11.9	5.26	15.55	4.71	12.99	1.56	1.31	1.4	1.09
451	MET	2.82	10.94	4.41	14	4.13	11.73	1.56	1.28	1.46	1.07
452	LET	3.33	12.54	5.12	16.4	4.94	13.94	1.54	1.31	1.48	1.11
453	CHN	2.42	9.46	3.79	11.78	3.37	9.69	1.56	1.25	1.39	1.02
457	MAB	2.39	8.47	3.34	10.33	2.74	8.21	1.4	1.22	1.15	0.97
458	MAB	2.84	8.9	3.35	10.62	2.63	8.38	1.18	1.19	0.93	0.94
460	WDN	2.64	8.62	3.3	10.35	2.62	8.18	1.25	1.2	0.99	0.95
461	BVL	2.31	8.24	3.31	10.21	2.76	8.15	1.44	1.24	1.2	0.99
463	HND	1.85	7.87	3.1	9.39	2.58	7.47	1.67	1.19	1.39	0.95
466	HND	2.91	11.2	4.5	14.41	4.27	12.15	1.55	1.29	1.47	1.08
467	WWT	3.27	12.21	5.09	16.01	4.85	13.61	1.55	1.31	1.48	1.11
471	HUK	2.51	9.37	3.88	12.12	3.6	10.25	1.55	1.29	1.43	1.09
472	MAB	3.07	8.84	3.5	10.78	2.61	8.23	1.14	1.22	0.85	0.93
473	HND	2.22	8.23	3.36	10.45	3.01	8.61	1.51	1.27	1.35	1.05
474	MAB	2.66	8.43	3.4	10.6	2.81	8.41	1.28	1.26	1.06	1
475	BVL	2.51	7.92	3.23	10.27	2.81	8.25	1.29	1.3	1.12	1.04
476	MAB	2.95	8.34	3.55	10.68	2.69	8.1	1.2	1.28	0.91	0.97
478	CCL	2.07	7.47	3.03	9.77	2.88	8.18	1.46	1.31	1.39	1.1
480	HUK	2.01	7.71	3.32	9.83	2.93	8.63	1.65	1.28	1.46	1.12
481	YTW	1.86	7.5	3.22	9.33	2.76	8.33	1.73	1.24	1.48	1.11
484	WWT	1.54	6.02	2.53	7.41	2.31	6.44	1.65	1.23	1.5	1.07
486	YTW	1.83	6.68	2.89	8.59	2.61	7.47	1.58	1.29	1.43	1.12
487	HUK	3.89	8.2	4.36	13.19	3.75	10.3	1.12	1.61	0.96	1.26
489	HUK	2.66	6.52	3.31	10.04	3.11	8.46	1.24	1.54	1.17	1.3

Appendix C-1b (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	1.11	4.81	1.95	5.62	1.93	4.83	1.75	1.17	1.74	1
496	MET	2.01	5.79	2.67	7.85	2.51	6.9	1.33	1.36	1.25	1.19
499	CVD	8.13	8.82	8.4	25.49	8.14	19.97	1.03	2.89	1	2.26
508	AGS	0.33	0.84	0.22	0.7	0.26	0.58	0.68	0.83	0.8	0.69
509	PHS	0.26	0.63	0.16	0.47	0.24	0.44	0.62	0.75	0.91	0.71
510	AGS	0.29	0.72	0.23	0.66	0.24	0.55	0.8	0.92	0.83	0.75
512	BVH	0.39	1.04	0.28	0.93	0.32	0.79	0.73	0.89	0.81	0.75
513	AGS	0.32	0.82	0.23	0.69	0.26	0.57	0.71	0.85	0.82	0.7
514	PHS	0.34	0.99	0.28	0.9	0.29	0.79	0.82	0.9	0.87	0.8
515	BVH	0.4	1.35	0.42	1.31	0.39	1.15	1.05	0.96	0.99	0.85
516	BVH	0.31	0.81	0.29	0.74	0.24	0.61	0.94	0.91	0.77	0.75
517	FLU	0.26	0.6	0.18	0.48	0.16	0.4	0.68	0.8	0.63	0.68
518	MGS	0.25	0.59	0.21	0.5	0.19	0.39	0.83	0.85	0.77	0.67
519	NVR	0.29	0.76	0.21	0.6	0.24	0.48	0.73	0.79	0.83	0.63
520	AGS	0.27	0.67	0.19	0.53	0.22	0.43	0.71	0.79	0.82	0.65
521	POK	0.23	0.55	0.17	0.43	0.21	0.39	0.72	0.79	0.89	0.7
523	PED	0.34	0.72	0.42	0.71	0.23	0.45	1.24	0.99	0.67	0.63
524	FLU	0.18	0.41	0.17	0.36	0.17	0.27	0.92	0.87	0.94	0.66
531	GDB	0.59	1.94	0.58	1.93	0.67	1.71	0.98	0.99	1.13	0.88
532	HKR	1.04	4.22	1.65	4.88	1.64	4.24	1.59	1.16	1.58	1.01
533	HND	1.23	4.54	1.82	5.23	1.64	4.45	1.48	1.15	1.33	0.98
534	MET	1.22	4.43	1.82	4.85	1.41	3.97	1.49	1.1	1.15	0.9
536	HND	1.07	3.71	1.5	3.88	1.1	3.12	1.41	1.05	1.03	0.84
537	BVH	0.64	2.23	0.74	2.26	0.73	1.99	1.16	1.02	1.14	0.89
538	HND	0.94	3.03	1.28	3.17	0.93	2.57	1.36	1.04	0.99	0.85
539	PHS	0.58	2.07	0.63	2.09	0.71	1.89	1.1	1.01	1.23	0.91
540	KLM	0.67	2.41	0.72	2.45	0.85	2.24	1.07	1.02	1.27	0.93
543	EOR	0.75	2.36	1	2.46	0.74	2.08	1.33	1.04	0.99	0.88
545	IRM	0.61	1.86	0.76	1.9	0.57	1.61	1.26	1.03	0.93	0.87
547	DEL	0.7	1.88	0.91	1.98	0.58	1.58	1.3	1.05	0.83	0.84
548	BVH	0.56	1.53	0.66	1.55	0.44	1.21	1.18	1.01	0.78	0.79
549	FLU	0.36	0.99	0.4	0.95	0.29	0.76	1.11	0.96	0.82	0.77
551	FLU	0.58	1.27	0.74	1.32	0.36	0.87	1.27	1.04	0.62	0.68
553	ATL	0.86	1.68	1.09	1.77	0.42	1.1	1.27	1.06	0.49	0.66
554	ATL	1.19	2.89	0.96	2.9	0.77	2.4	0.8	1	0.65	0.83
555	CYG	0.54	0.88	0.77	0.94	0.25	0.39	1.42	1.07	0.47	0.44
558	DEL	1.44	3.74	1.01	3.68	0.99	3.2	0.7	0.98	0.69	0.86
559	ATL	0.84	2.24	0.66	2.26	0.62	1.85	0.79	1.01	0.74	0.83
561	ATL	0.82	1.91	0.71	1.93	0.52	1.5	0.87	1.01	0.63	0.78
562	BGH	1.38	3.68	1	3.59	0.95	2.99	0.73	0.97	0.69	0.81
563	BSK	1.04	2.09	1.15	2.16	0.51	1.46	1.11	1.03	0.49	0.7
564	LET	14.31	44.54	9.65	48.88	9.02	34.58	0.67	1.1	0.63	0.78
565	DEL	1.56	4.05	1.11	3.95	1.04	3.38	0.71	0.98	0.67	0.83
566	DEL	2.68	7.63	1.71	7.2	1.74	5.93	0.64	0.94	0.65	0.78
567	BSK	2.25	5.48	1.89	5.39	1.35	4.05	0.84	0.99	0.6	0.74
568	DEL	1.03	2.75	1.26	2.88	0.83	2.32	1.23	1.05	0.81	0.84
569	IRM	1.43	3.42	1.53	3.51	0.92	2.57	1.07	1.03	0.64	0.75
570	HAN	2.07	4.93	2.14	5.05	1.3	3.55	1.03	1.03	0.63	0.72
571	HAN	1.54	4.91	2.14	5.57	1.56	4.47	1.39	1.14	1.02	0.91
572	DVG	3.84	12.19	3.02	13.85	2.13	8.53	0.79	1.14	0.55	0.7
574	LET	3.22	6.97	3.11	7.12	1.7	4.49	0.97	1.02	0.53	0.64
575	WWT	4.63	12.3	3.1	11.94	2.92	9.48	0.67	0.97	0.63	0.77
576	DMH	2.93	7.33	2.75	7.55	1.91	5.59	0.94	1.03	0.65	0.76
577	BZR	6.87	19.54	5.44	22	3.68	13.99	0.79	1.13	0.54	0.72
578	HAN	2.83	7.6	2.67	8.22	2.17	6.64	0.95	1.08	0.77	0.87
579	LET	4.69	12.1	3.31	11.91	2.91	9.26	0.71	0.98	0.62	0.77
581	HKR	1.79	5.54	2.42	7.02	2.19	6	1.35	1.27	1.22	1.08

Appendix C-1b (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	1.82	5.35	2.38	6.29	1.89	5.23	1.31	1.18	1.04	0.98
583	HAN	1.9	5.49	2.48	6.81	2.05	5.67	1.3	1.24	1.08	1.03
584	DMH	1.55	4.76	1.99	5.02	1.39	3.98	1.28	1.06	0.89	0.84
589	HAN	2.05	5.75	2.56	6.93	2.11	5.82	1.25	1.21	1.03	1.01
590	CHN	3.18	9.09	3.11	10.31	2.24	7.98	0.98	1.13	0.7	0.88
591	BVL	3.45	9.5	3.5	11.17	2.51	8.4	1.02	1.18	0.73	0.88
592	FMT	3.79	10.31	3.67	12.1	2.66	8.97	0.97	1.17	0.7	0.87
593	CVD	3.55	9.82	3.55	11.51	2.48	8.46	1	1.17	0.7	0.86
595	ATP	2.67	8.75	2.41	10.06	1.83	7.37	0.9	1.15	0.68	0.84
596	FMT	3.23	9.77	2.41	10.65	1.87	8.19	0.75	1.09	0.58	0.84
598	FMT	3.35	10.01	2.48	10.94	1.93	8.42	0.74	1.09	0.58	0.84
599	MAB	5.15	13.63	4.66	15.25	3.27	11	0.91	1.12	0.64	0.81
600	CVD	4.43	12.1	3.65	13.27	2.57	9.95	0.82	1.1	0.58	0.82
601	MAB	4.67	10.79	4.62	14.03	3.46	10.37	0.99	1.3	0.74	0.96
602	MAB	5.26	12.87	4.94	15.3	3.59	11.13	0.94	1.19	0.68	0.86
603	MAB	5.68	15.95	4.09	16.81	3.44	13.07	0.72	1.05	0.61	0.82
605	HDY	5.88	14.02	4.69	15.28	3.66	11.52	0.8	1.09	0.62	0.82
606	CVD	6.96	11.35	6.59	19.84	5.89	15.28	0.95	1.75	0.85	1.35
607	CVD	5.98	9.82	5.73	18.22	5.42	14.37	0.96	1.86	0.91	1.46
608	MCT	4.92	10.66	4.09	14.5	3.83	11.53	0.83	1.36	0.78	1.08
609	TIY	6.12	11.97	5.03	13.66	3.74	10.12	0.82	1.14	0.61	0.85
610	BVL	6.81	19.16	4.55	19.83	4.25	15.26	0.67	1.03	0.62	0.8
611	HUK	5.4	13.11	3.99	14.47	3.55	11.11	0.74	1.1	0.66	0.85
613	CCL	3.79	10.43	2.65	11.57	2.61	9.36	0.7	1.11	0.69	0.9
615	CVD	8.88	28.19	5.62	29.36	5.44	21.8	0.63	1.04	0.61	0.77
616	CHN	6	18.69	3.89	19.31	3.49	14.42	0.65	1.03	0.58	0.77
617	FMT	4.5	13.33	3.23	14.17	2.45	10.67	0.72	1.06	0.55	0.8
618	CHN	4.09	11.74	3.15	12.59	2.19	9.52	0.77	1.07	0.54	0.81
619	FMT	3.66	10.89	2.72	11.85	2.05	9.07	0.74	1.09	0.56	0.83
620	MAB	3.9	11.4	3.4	12.67	2.31	9.31	0.87	1.11	0.59	0.82
621	TTH	3.66	11.43	3.45	13.39	2.43	9.79	0.94	1.17	0.66	0.86
622	TTH	3.79	11.58	3.68	13.54	2.49	9.77	0.97	1.17	0.66	0.84
623	ZRB	3.77	11.5	3.91	13.54	2.57	9.68	1.04	1.18	0.68	0.84
624	THA	3.47	11.4	3.96	14.21	2.69	10.13	1.14	1.25	0.78	0.89
626	SIL	4.21	11.25	4.21	11.92	2.46	8.42	1	1.06	0.58	0.75
627	MAB	4.41	11.9	4.08	12.68	2.48	9	0.93	1.07	0.56	0.76
628	BVL	4.85	13.09	4.09	13.9	2.56	9.86	0.84	1.06	0.53	0.75
629	SIL	4.53	12.04	3.99	12.78	2.42	9.07	0.88	1.06	0.53	0.75
631	MAB	4.86	12.5	3.55	13.08	2.2	9.37	0.73	1.05	0.45	0.75
632	MAB	6.73	18.34	4.69	19.56	2.62	12.69	0.7	1.07	0.39	0.69
633	MAB	8.33	24.44	5.81	26.3	3.97	17.6	0.7	1.08	0.48	0.72
634	MAB	5.44	13.92	4.07	14.53	2.48	10.2	0.75	1.04	0.46	0.73
635	MAB	6.18	16.49	4.41	17.35	2.73	11.9	0.71	1.05	0.44	0.72
637	MSN	8.36	24.56	5.88	26.54	3.95	17.62	0.7	1.08	0.47	0.72
638	ZRB	6.5	17.62	4.6	18.62	2.85	12.6	0.71	1.06	0.44	0.72
639	PUR	9.56	28.31	6.99	30.6	5.75	21.62	0.73	1.08	0.6	0.76
641	MAB	8.95	27.72	6	29.4	4.87	20.57	0.67	1.06	0.54	0.74
642	MAB	7.06	22.9	4.38	23.5	4.11	17.08	0.62	1.03	0.58	0.75
643	CHN	11.79	38.07	7.67	40.09	7.19	29.01	0.65	1.05	0.61	0.76
645	DLB	9.57	28.51	7.39	30.94	6.1	22.1	0.77	1.09	0.64	0.78
648	CFD	8.4	25.94	5.2	26.97	5.48	21.12	0.62	1.04	0.65	0.81
649	BVL	7.82	26.66	4.77	27.77	4.75	20.57	0.61	1.04	0.61	0.77
650	MAB	6.63	21.36	4.04	22.23	4.13	16.7	0.61	1.04	0.62	0.78
651	RDM	4.8	14.28	2.77	14.47	3.13	11.38	0.58	1.01	0.65	0.8
653	LET	6.54	19.94	3.82	19.75	4.22	15.83	0.58	0.99	0.65	0.79
654	PUY	3.67	10.39	2.6	11.23	2.54	9.17	0.71	1.08	0.69	0.88
655	DEL	3.75	11.41	2.25	10.94	2.48	8.88	0.6	0.96	0.66	0.78

Appendix C-1b (Continued):

Poly #	Soil name	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	7.03	21.93	4.35	22.54	4.39	17.15	0.62	1.03	0.62	0.78
657	LET	11.07	34.8	7.32	37.74	6.72	26.98	0.66	1.08	0.61	0.78
658	CMY	13.23	40.83	8.73	44.59	7.73	32.04	0.66	1.09	0.58	0.78
659	DEL	2.72	8.86	1.75	8.52	1.88	6.67	0.64	0.96	0.69	0.75
660	CVD	4.43	11.34	3.28	13.1	3.17	10.47	0.74	1.16	0.72	0.92
661	RDM	6.46	20.14	3.9	21.06	4.06	15.9	0.6	1.05	0.63	0.79
663	LET	11.3	35.5	7.36	38.29	6.8	27.7	0.65	1.08	0.6	0.78
664	RDM	8.22	25.73	5.05	26.75	5.08	20.16	0.61	1.04	0.62	0.78
666	PUR	8.98	26.75	6.55	28.9	5.43	20.47	0.73	1.08	0.6	0.77
667	LET	13.18	41.16	9.26	44.33	8.26	31.71	0.7	1.08	0.63	0.77
669	LOB	0.46	0.88	0.48	0.91	0.25	0.61	1.05	1.03	0.56	0.69
671	PHS	0.64	1.2	0.8	1.26	0.31	0.75	1.25	1.06	0.48	0.63
672	PED	0.59	1.07	0.77	1.13	0.29	0.61	1.31	1.06	0.49	0.57
673	MMO	0.45	0.76	0.63	0.81	0.22	0.37	1.38	1.06	0.49	0.49
675	BTN	0.24	0.47	0.3	0.46	0.16	0.27	1.23	0.98	0.67	0.58
676	CYG	0.21	0.44	0.24	0.42	0.17	0.27	1.14	0.95	0.78	0.61
677	BEN	0.42	0.71	0.59	0.75	0.21	0.34	1.39	1.05	0.5	0.48
680	PNC	0.13	0.24	0.14	0.25	0.08	0.16	1.12	1.05	0.62	0.67
681	CYG	0.32	0.59	0.4	0.61	0.17	0.36	1.27	1.05	0.55	0.61
682	BEN	0.19	0.33	0.23	0.33	0.11	0.19	1.24	1.01	0.59	0.57
683	HUB	0.12	0.28	0.11	0.23	0.12	0.22	0.92	0.83	1.05	0.78
684	CAR	0.08	0.14	0.09	0.14	0.06	0.09	1.16	1.02	0.7	0.64
686	LOB	0.29	0.56	0.3	0.58	0.17	0.41	1.04	1.03	0.6	0.72
689	CAR	0.06	0.11	0.06	0.1	0.05	0.08	1.08	0.94	0.86	0.75
690	RMY	0.19	0.36	0.23	0.35	0.13	0.21	1.21	0.98	0.65	0.59
691	HUB	0.05	0.11	0.06	0.1	0.05	0.09	1.17	0.93	1.07	0.81
692	BTN	0.09	0.2	0.1	0.17	0.09	0.14	1.04	0.89	0.95	0.72
693	RMY	0.16	0.36	0.16	0.32	0.15	0.23	1.01	0.89	0.92	0.65
694	HUB	0.16	0.37	0.13	0.29	0.16	0.28	0.82	0.8	0.99	0.75
695	BTN	0.2	0.47	0.12	0.34	0.21	0.4	0.58	0.73	1.04	0.85
696	BTN	0.16	0.38	0.11	0.3	0.15	0.3	0.71	0.79	0.96	0.78
698	MYW	0.09	0.23	0.1	0.2	0.09	0.19	1.1	0.85	1.02	0.82
699	HUB	0.16	0.34	0.11	0.26	0.12	0.26	0.69	0.77	0.78	0.77
702	CVL	0.22	0.64	0.14	0.55	0.2	0.48	0.63	0.85	0.89	0.74
703	HGV	0.21	0.53	0.15	0.44	0.17	0.41	0.68	0.84	0.77	0.77
705	MCO	0.22	0.36	0.14	0.23	0.11	0.26	0.66	0.64	0.5	0.71
708	MLA	0.14	0.28	0.1	0.23	0.11	0.24	0.72	0.82	0.78	0.84
709	COA	0.13	0.29	0.11	0.29	0.15	0.3	0.85	0.99	1.15	1.02
710	COA	0.26	0.74	0.18	0.7	0.22	0.6	0.72	0.95	0.87	0.82
711	COA	0.2	0.51	0.15	0.51	0.19	0.46	0.77	0.99	0.94	0.91
715	KVG	0.3	0.86	0.23	0.93	0.26	0.77	0.78	1.08	0.87	0.9

Appendix C-1c: Annual wind erosion (t/ha) from canola-wheat-fallow averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	0.51	0.76	0.49	0.84	0.6	0.95	0.96	1.11	1.17	1.25
3	DON	0.58	1.04	0.55	0.99	0.71	1.17	0.95	0.96	1.22	1.13
4	HZM	0.73	1.45	0.69	1.27	0.93	1.51	0.95	0.88	1.27	1.04
5	DON	0.73	1.51	0.67	1.29	0.93	1.57	0.92	0.85	1.27	1.04
6	ESH	0.46	0.9	0.44	0.85	0.61	1.02	0.95	0.94	1.32	1.13
7	COS	0.71	1.2	0.68	1.19	0.8	1.35	0.96	0.99	1.13	1.13
9	BBN	1.61	2.99	1.61	2.69	1.73	3.01	1	0.9	1.07	1.01
10	BBN	1.84	3.58	1.62	3.08	1.86	3.63	0.88	0.86	1.01	1.01
11	ESH	1.25	2.42	1.09	2.13	1.27	2.53	0.87	0.88	1.02	1.04
13	HZM	1.78	3.28	1.61	2.92	1.7	3.29	0.9	0.89	0.96	1
14	COS	2.16	4	2.16	3.58	2.22	3.96	1	0.9	1.03	0.99
15	ABT	2.25	4.16	2.13	3.7	2.21	4.13	0.95	0.89	0.98	0.99
19	HZM	2.25	4.19	2.12	3.71	2.21	4.16	0.94	0.89	0.98	0.99
20	LAD	2	3.82	1.75	3.29	1.9	3.85	0.88	0.86	0.95	1.01
22	COS	2.05	3.82	1.68	3.33	1.83	3.84	0.82	0.87	0.89	1.01
27	DON	1.76	3.14	1.66	2.86	1.44	2.99	0.94	0.91	0.82	0.95
28	HZM	0.88	1.53	0.83	1.46	0.96	1.66	0.95	0.95	1.1	1.09
32	HRT	1.97	3.86	1.91	3.16	1.86	3.85	0.97	0.82	0.94	1
33	HRT	1.95	3.81	1.85	3.15	1.84	3.81	0.95	0.83	0.94	1
36	COS	1.81	3.47	1.78	2.93	1.64	3.4	0.98	0.84	0.91	0.98
47	DON	1.14	2.17	1.03	1.93	1.08	2.26	0.91	0.89	0.95	1.04
48	DON	1.55	3.02	1.36	2.58	1.47	3.09	0.88	0.85	0.95	1.02
49	TAG	1.72	3.36	1.53	2.82	1.62	3.4	0.89	0.84	0.94	1.01
51	SAD	1.88	3.77	1.48	3.15	1.8	3.88	0.79	0.84	0.96	1.03
52	VVW	1.87	3.67	1.66	3.08	1.78	3.71	0.89	0.84	0.95	1.01
53	TAG	1.93	3.73	1.79	3.13	1.82	3.74	0.93	0.84	0.94	1
54	ESH	1.75	3.55	1.3	2.96	1.67	3.68	0.74	0.83	0.96	1.04
56	ZBR	0.72	1.3	0.7	1.26	0.71	1.44	0.98	0.96	1	1.1
59	FAL	0.41	0.73	0.43	0.81	0.47	0.99	1.04	1.11	1.15	1.36
60	BBN	0.24	0.38	0.32	0.57	0.33	0.7	1.31	1.51	1.38	1.85
61	RYF	1.27	2.53	1.01	2.17	1.26	2.68	0.79	0.86	0.99	1.06
62	DVS	0.39	0.65	0.35	0.67	0.47	0.89	0.9	1.03	1.21	1.36
64	JUH	0.42	0.73	0.41	0.77	0.5	0.98	0.97	1.06	1.18	1.35
68	HRT	0.67	1.24	0.58	1.15	0.73	1.45	0.87	0.92	1.08	1.17
70	JUH	0.56	1.04	0.5	1	0.61	1.22	0.88	0.96	1.07	1.17
71	BBN	1.02	1.99	0.83	1.75	1.02	2.14	0.82	0.88	1.01	1.08
72	BLY	1.19	2.36	0.95	2.03	1.19	2.51	0.8	0.86	1	1.07
73	RYF	0.81	1.56	0.72	1.41	0.87	1.67	0.89	0.9	1.08	1.07
74	JUH	0.47	0.86	0.43	0.86	0.51	1.01	0.92	1	1.07	1.17
75	DIG	0.31	0.55	0.32	0.61	0.41	0.73	1.03	1.1	1.3	1.31
76	JUH	0.38	0.66	0.36	0.7	0.43	0.85	0.95	1.06	1.14	1.28
77	LAD	0.37	0.65	0.36	0.69	0.43	0.81	0.98	1.07	1.18	1.26
78	ABT	0.39	0.68	0.38	0.72	0.45	0.86	0.97	1.06	1.16	1.27
80	BWY	0.25	0.41	0.27	0.48	0.3	0.55	1.07	1.19	1.21	1.35
81	HZM	0.28	0.47	0.3	0.55	0.35	0.64	1.07	1.17	1.27	1.37
83	BUD	0.21	0.33	0.25	0.45	0.28	0.49	1.19	1.38	1.31	1.51
84	HZM	0.21	0.32	0.26	0.46	0.27	0.48	1.22	1.42	1.29	1.51
87	NPA	0.3	0.5	0.32	0.59	0.39	0.69	1.05	1.18	1.29	1.37
88	FAL	0.27	0.46	0.3	0.56	0.36	0.65	1.08	1.21	1.31	1.41
89	JUH	0.5	0.78	0.46	0.82	0.59	0.96	0.94	1.06	1.19	1.24
91	HZM	0.32	0.52	0.27	0.54	0.42	0.71	0.83	1.05	1.32	1.36
93	DON	0.29	0.49	0.31	0.58	0.38	0.68	1.07	1.18	1.3	1.37
94	HRT	0.3	0.52	0.31	0.58	0.39	0.7	1.04	1.12	1.32	1.34
97	FAL	0.32	0.49	0.35	0.64	0.38	0.79	1.12	1.32	1.21	1.61
98	HZM	0.31	0.45	0.41	0.7	0.36	0.71	1.3	1.57	1.14	1.59

Appendix C-1c (Continued):

Poly #	Soil name	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	0.43	0.61	0.45	0.79	0.45	0.97	1.05	1.3	1.04	1.58
101	FAL	0.31	0.49	0.33	0.59	0.36	0.69	1.06	1.21	1.17	1.42
102	WHW	0.25	0.37	0.29	0.5	0.29	0.55	1.17	1.36	1.17	1.48
103	ABT	0.23	0.34	0.32	0.56	0.31	0.56	1.38	1.65	1.33	1.64
104	HZM	0.26	0.38	0.36	0.62	0.33	0.61	1.37	1.65	1.27	1.63
105	CTE	0.35	0.49	0.46	0.78	0.41	0.78	1.32	1.61	1.16	1.59
107	ALC	0.28	0.44	0.33	0.58	0.37	0.64	1.17	1.32	1.32	1.45
108	HZM	0.23	0.31	0.36	0.61	0.31	0.56	1.57	1.95	1.36	1.8
109	PRV	0.26	0.34	0.39	0.66	0.33	0.59	1.55	1.92	1.3	1.74
110	CTE	0.38	0.51	0.53	0.87	0.44	0.83	1.38	1.7	1.15	1.62
112	ALC	0.29	0.39	0.43	0.72	0.37	0.66	1.5	1.85	1.29	1.68
130	DVS	0.04	0.06	0.06	0.11	0.06	0.11	1.51	1.87	1.39	1.82
132	CTE	0.04	0.06	0.06	0.11	0.06	0.12	1.48	1.86	1.29	1.98
133	BBN	0.34	0.57	0.38	0.74	0.37	0.85	1.13	1.3	1.11	1.5
135	DVS	0.34	0.6	0.38	0.74	0.4	0.88	1.1	1.23	1.15	1.46
144	BBN	0.42	0.83	0.39	0.88	0.37	0.94	0.94	1.06	0.88	1.13
170	HUB	0.08	0.15	0.1	0.27	0.13	0.25	1.22	1.76	1.55	1.62
171	HUB	0.2	0.32	0.25	0.47	0.24	0.56	1.3	1.47	1.21	1.74
172	KTH	0.08	0.16	0.11	0.22	0.13	0.26	1.39	1.38	1.57	1.65
173	CUL	0.06	0.11	0.08	0.16	0.1	0.19	1.41	1.41	1.65	1.7
176	HRT	0.2	0.42	0.3	0.48	0.35	0.65	1.48	1.13	1.76	1.54
177	HRT	0.23	0.41	0.37	0.64	0.36	0.77	1.61	1.54	1.58	1.86
178	HPE	0.26	0.57	0.52	1.02	0.48	1.19	1.99	1.78	1.84	2.07
180	KNZ	0.25	0.53	0.57	0.98	0.47	1.06	2.26	1.85	1.85	2.01
181	COS	0.25	0.54	0.69	1.1	0.49	1.07	2.75	2.03	1.96	1.98
182	ATO	0.26	0.56	0.46	0.93	0.47	1.18	1.75	1.67	1.79	2.11
185	UCS	0.26	0.56	0.42	0.89	0.46	1.15	1.63	1.59	1.78	2.05
189	CUL	0.21	0.43	0.33	0.53	0.37	0.7	1.57	1.23	1.77	1.62
192	COA	0.13	0.26	0.19	0.34	0.23	0.44	1.43	1.27	1.76	1.68
193	MLA	0.09	0.16	0.11	0.24	0.14	0.3	1.25	1.46	1.62	1.81
194	MLA	0.23	0.5	0.36	0.75	0.41	0.95	1.55	1.49	1.76	1.91
196	LNN	0.28	0.62	0.4	0.99	0.49	1.37	1.42	1.6	1.75	2.21
197	COA	0.29	0.64	0.46	1.06	0.5	1.31	1.59	1.67	1.72	2.06
198	COA	0.18	0.39	0.27	0.55	0.32	0.7	1.49	1.43	1.76	1.82
201	HRT	0.03	0.04	0.03	0.07	0.04	0.08	1.25	1.58	1.61	1.81
211	ZOR	0.27	0.6	0.8	1.24	0.54	1.15	2.96	2.08	1.99	1.93
212	ABC	0.29	0.61	0.79	1.21	0.54	1.16	2.69	1.99	1.86	1.92
215	ABC	0.32	0.68	0.89	1.38	0.61	1.31	2.82	2.01	1.93	1.92
218	KNZ	0.44	0.92	1.3	1.88	0.86	1.8	2.94	2.03	1.94	1.95
221	EGL	0.2	0.38	0.62	0.86	0.39	0.82	3.03	2.27	1.91	2.16
224	ABC	0.26	0.5	0.8	1.11	0.51	1.05	3.06	2.21	1.94	2.1
227	TNW	0.44	0.89	1.31	1.84	0.84	1.72	3	2.06	1.93	1.92
231	ABC	0.46	0.96	1.33	1.96	0.88	1.84	2.9	2.03	1.91	1.91
232	MLA	0.46	0.93	1.48	1.96	0.92	1.82	3.24	2.11	2.01	1.96
233	KNZ	0.41	0.82	1.3	1.73	0.81	1.62	3.19	2.11	1.99	1.97
236	ABC	0.2	0.42	0.57	0.83	0.36	0.79	2.88	1.99	1.83	1.89
240	KNZ	0.38	0.8	1.14	1.64	0.73	1.54	3.04	2.05	1.95	1.93
246	GDI	0.22	0.44	0.49	0.71	0.29	0.65	2.2	1.63	1.33	1.49
248	GDI	0.28	0.52	0.43	0.69	0.29	0.65	1.56	1.32	1.05	1.25
250	ABC	0.34	0.68	0.6	1.03	0.44	0.98	1.77	1.51	1.3	1.43
252	UCS	0.32	0.7	0.7	1.3	0.59	1.43	2.21	1.84	1.86	2.04
253	COD	0.34	0.76	0.7	1.37	0.62	1.54	2.04	1.8	1.8	2.03
254	PIB	0.34	0.76	0.57	1.3	0.6	1.6	1.68	1.7	1.76	2.09
258	POK	0.89	2.23	1.86	4.11	1.61	4.28	2.08	1.85	1.8	1.92
259	RDW	0.54	1.26	1.1	2.3	0.94	2.39	2.04	1.83	1.75	1.9
261	NIT	0.57	1.34	1.2	2.48	0.99	2.48	2.11	1.85	1.72	1.85
264	COA	0.43	0.94	0.94	1.76	0.7	1.64	2.19	1.87	1.65	1.74

Appendix C-1c (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	0.44	0.94	1.12	1.84	0.78	1.73	2.56	1.95	1.79	1.84
271	FLU	0.54	1.2	1.1	2.16	0.87	2.09	2.02	1.8	1.6	1.74
275	RDW	0.55	1.08	0.98	1.69	0.7	1.54	1.79	1.57	1.27	1.43
279	ABC	0.41	0.83	0.74	1.27	0.53	1.17	1.81	1.53	1.3	1.41
290	ABC	0.24	0.52	0.49	0.74	0.28	0.69	2.07	1.44	1.16	1.35
291	LCY	0.41	1.12	1.17	1.72	0.54	1.59	2.83	1.53	1.3	1.42
292	TMN	0.54	1.53	1.38	2.38	0.81	2.37	2.54	1.56	1.48	1.55
296	NIT	1.5	2.16	1.32	1.96	0.95	1.87	0.88	0.91	0.63	0.87
297	GOG	0.69	1.38	1.19	1.77	0.65	1.66	1.73	1.28	0.94	1.2
301	SDN	1.13	1.67	1.04	1.6	0.79	1.52	0.92	0.96	0.7	0.91
302	LCY	1.39	1.99	1.15	1.78	0.93	1.72	0.83	0.89	0.67	0.87
306	LCY	0.44	0.8	0.6	1.02	0.47	0.96	1.38	1.28	1.08	1.2
310	FRY	0.83	1.43	1.19	1.7	0.79	1.43	1.44	1.19	0.96	1
311	FRY	0.58	1.07	1	1.57	0.65	1.35	1.73	1.46	1.12	1.25
312	FRY	0.74	1.29	1.26	1.77	0.73	1.4	1.71	1.37	0.98	1.09
315	NTW	0.65	1.49	0.93	2.2	0.96	2.42	1.44	1.47	1.47	1.62
316	LCY	0.56	1.31	0.75	1.96	0.92	2.19	1.33	1.5	1.63	1.67
317	LCY	0.73	1.47	1.09	1.93	0.81	1.93	1.5	1.31	1.11	1.31
320	FRY	0.69	1.25	0.78	1.51	0.78	1.53	1.12	1.21	1.13	1.22
322	LCY	0.39	0.74	0.54	1.03	0.55	1.08	1.39	1.39	1.42	1.45
323	LCY	0.41	0.8	0.56	1.1	0.58	1.15	1.38	1.37	1.42	1.43
325	LCY	0.59	1.07	0.69	1.26	0.66	1.28	1.17	1.18	1.12	1.2
326	LCY	1.12	1.69	0.99	1.59	0.85	1.56	0.89	0.94	0.76	0.92
334	LCY	0.63	1.24	0.93	1.44	0.75	1.31	1.47	1.16	1.19	1.06
335	FRY	0.47	0.88	0.62	1.07	0.57	1.11	1.31	1.22	1.2	1.27
337	MGS	0.36	0.78	0.41	0.88	0.42	1	1.16	1.12	1.18	1.28
339	LFN	0.33	0.76	0.38	0.83	0.39	0.96	1.14	1.1	1.17	1.26
341	MGS	0.43	0.85	0.56	1	0.54	1.06	1.31	1.17	1.26	1.24
342	LFN	0.44	0.95	0.59	1.07	0.61	1.12	1.35	1.12	1.4	1.17
343	FRY	0.42	0.97	0.59	1.07	0.65	1.12	1.4	1.11	1.53	1.16
344	BSU	0.33	0.69	0.46	0.82	0.45	0.86	1.4	1.2	1.36	1.25
345	SDN	0.3	0.61	0.44	0.76	0.4	0.78	1.47	1.25	1.35	1.28
346	PHS	0.49	1.02	0.71	1.19	0.64	1.14	1.47	1.16	1.32	1.11
347	SDN	0.64	1.17	1.08	1.54	0.65	1.23	1.69	1.31	1.02	1.04
348	SDN	0.7	1.29	1.12	1.61	0.74	1.33	1.6	1.25	1.05	1.03
350	LFN	0.52	1.07	1.05	1.56	0.54	1.15	2.01	1.45	1.04	1.07
351	LFN	0.35	0.73	0.61	0.99	0.42	0.87	1.73	1.35	1.2	1.19
352	RDW	0.26	0.61	0.48	0.86	0.36	0.78	1.88	1.41	1.4	1.28
354	BVH	0.29	0.75	0.29	0.75	0.33	0.92	0.99	1.01	1.15	1.23
356	EOR	0.52	0.92	0.77	1.25	0.74	1.45	1.48	1.35	1.42	1.57
357	EOR	0.39	0.81	0.51	0.96	0.54	1.12	1.3	1.19	1.38	1.38
359	RED	0.46	0.97	0.59	1.08	0.71	1.31	1.3	1.11	1.56	1.35
360	EOR	0.38	0.83	0.5	0.94	0.58	1.12	1.31	1.13	1.52	1.35
362	EOR	0.45	1.13	0.56	1.31	0.76	1.39	1.26	1.16	1.7	1.22
363	EOR	0.6	1.41	0.7	1.58	1.05	1.81	1.16	1.12	1.74	1.28
364	EOR	1.04	1.97	1.3	2.16	1.86	3	1.25	1.1	1.78	1.52
365	HND	1.05	2	1.22	2.22	1.74	2.82	1.16	1.11	1.66	1.41
366	DCY	0.86	1.7	0.95	1.9	1.4	2.27	1.1	1.12	1.62	1.34
367	HND	0.8	1.6	0.89	1.79	1.29	2.13	1.11	1.11	1.61	1.33
370	HND	1.69	2.78	1.64	3.28	2.33	3.55	0.97	1.18	1.38	1.28
371	WWT	1.38	2.34	1.39	2.62	1.72	2.89	1.01	1.12	1.25	1.23
372	EOR	0.93	1.71	1.04	1.89	1.29	2.2	1.12	1.11	1.39	1.28
374	EOR	0.78	1.35	0.98	1.66	1.04	1.89	1.26	1.23	1.34	1.4
375	WWT	1.17	1.93	1.31	2.26	1.38	2.5	1.12	1.17	1.18	1.3
376	HND	1.51	2.47	1.51	2.74	1.64	2.96	1	1.11	1.09	1.2
378	HND	1.53	2.52	1.37	2.69	1.58	2.9	0.89	1.07	1.04	1.15
392	AGS	0.69	1.26	1.2	1.86	0.74	1.52	1.74	1.47	1.08	1.21

Appendix C-1c (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	0.48	1	0.82	1.75	0.72	1.7	1.71	1.75	1.51	1.7
396	AGS	0.66	1.54	1.16	2.66	1.08	2.76	1.75	1.73	1.62	1.79
401	MGS	1.36	3.47	2.9	6.48	2.47	6.63	2.12	1.86	1.81	1.91
403	CMO	0.43	0.9	0.7	1.51	0.62	1.49	1.64	1.69	1.46	1.66
404	AGS	0.39	0.79	0.6	1.36	0.58	1.32	1.54	1.71	1.47	1.66
405	CMO	0.55	1.05	0.93	1.62	0.66	1.42	1.7	1.55	1.21	1.35
408	AGS	0.37	0.74	0.62	1.07	0.44	0.96	1.67	1.44	1.18	1.29
409	AGS	0.39	0.83	0.45	0.9	0.45	0.96	1.16	1.08	1.16	1.15
410	UCS	0.52	1.15	0.88	1.9	0.77	1.91	1.68	1.65	1.47	1.66
411	COA	0.47	0.97	0.56	1.42	0.63	1.53	1.2	1.47	1.35	1.59
412	CMO	0.32	0.65	0.43	0.79	0.37	0.78	1.34	1.22	1.13	1.2
416	WKN	1.43	3.66	2.99	6.79	2.59	7	2.1	1.86	1.82	1.91
418	MMO	0.59	1.42	1.13	2.54	1.04	2.79	1.9	1.79	1.75	1.96
420	TBY	0.38	0.85	0.63	1.45	0.64	1.77	1.66	1.71	1.71	2.08
421	HND	1.93	3.35	2.11	3.7	2.68	4.31	1.09	1.11	1.39	1.29
422	HCH	3.88	6.08	4.28	6.84	4.43	7.16	1.1	1.13	1.14	1.18
423	LET	5.29	8.09	5.85	9.07	5.6	9.17	1.11	1.12	1.06	1.13
425	HND	3.02	5.06	3.39	5.33	3.8	6.32	1.13	1.05	1.26	1.25
426	MMO	0.62	1.46	1.05	2.47	1.02	2.66	1.69	1.69	1.64	1.82
428	HND	4.33	6.8	4.96	7.65	5.09	8.9	1.15	1.13	1.17	1.31
429	FLU	0.39	0.76	0.31	0.9	0.46	1.04	0.79	1.19	1.19	1.38
430	MCO	0.4	0.86	0.39	0.94	0.49	1.06	0.97	1.1	1.21	1.24
431	AGS	0.42	0.97	0.4	0.88	0.5	1.02	0.95	0.91	1.19	1.05
432	KVG	0.34	0.72	0.35	0.85	0.47	1.03	1.03	1.17	1.37	1.42
433	POK	0.28	0.56	0.28	0.71	0.38	0.86	1	1.27	1.38	1.54
435	BTN	0.26	0.55	0.25	0.61	0.43	0.9	0.96	1.12	1.67	1.66
437	POK	0.33	0.73	0.32	0.72	0.44	0.91	0.97	0.99	1.34	1.25
439	COA	0.48	1.04	0.73	1.61	0.68	1.67	1.5	1.54	1.41	1.6
440	COA	0.33	0.71	0.46	1.14	0.53	1.45	1.41	1.6	1.61	2.04
441	MMO	0.7	1.69	1.29	2.99	1.2	3.23	1.85	1.77	1.73	1.91
442	WTB	0.31	0.65	0.38	0.96	0.46	1.13	1.22	1.47	1.49	1.73
443	HND	2.05	3.69	2.34	3.9	2.9	4.75	1.14	1.06	1.41	1.29
444	MET	1.44	3.11	1.89	3.3	2.59	4.17	1.31	1.06	1.8	1.34
449	KUR	7.2	11.36	7.93	12.82	8.17	14.12	1.1	1.13	1.13	1.24
451	MET	6.9	10.48	7.57	11.85	7.28	13.23	1.1	1.13	1.05	1.26
452	LET	7.6	12.04	8.23	13.57	8.6	15.27	1.08	1.13	1.13	1.27
453	CHN	6.24	9.07	6.93	10.24	6.12	11.26	1.11	1.13	0.98	1.24
457	MAB	6.35	8.68	6.85	9.5	5.57	9.99	1.08	1.09	0.88	1.15
458	MAB	7.1	9.69	7.25	10.09	6.26	10.26	1.02	1.04	0.88	1.06
460	WDN	6.77	9.22	7.04	9.75	5.93	10.02	1.04	1.06	0.87	1.09
461	BVL	6.18	8.4	6.72	9.32	5.5	9.82	1.09	1.11	0.89	1.17
463	HND	5.54	7.51	6.32	8.55	4.67	9.31	1.14	1.14	0.84	1.24
466	HND	6.99	10.72	7.63	12.11	7.55	13.57	1.09	1.13	1.08	1.27
467	WWT	7.31	11.64	7.97	13.15	8.41	14.83	1.09	1.13	1.15	1.27
471	HUK	6.07	8.94	6.7	10.19	6.57	11.43	1.1	1.14	1.08	1.28
472	MAB	7.21	9.64	7.28	10.13	5.91	9.73	1.01	1.05	0.82	1.01
473	HND	5.86	8.03	6.39	9.15	5.84	9.9	1.09	1.14	1	1.23
474	MAB	6.63	8.89	6.9	9.7	5.97	9.84	1.04	1.09	0.9	1.11
475	BVL	6.35	8.31	6.54	9.24	6.08	9.37	1.03	1.11	0.96	1.13
476	MAB	6.81	8.99	6.97	9.77	5.53	9.13	1.02	1.09	0.81	1.02
478	CCL	5.61	7.33	5.94	8.48	6.11	9.15	1.06	1.16	1.09	1.25
480	HUK	4.68	6.76	5.54	7.96	5.17	9.63	1.18	1.18	1.1	1.43
481	YTW	4.25	6.18	5.24	7.37	4.67	9.37	1.23	1.19	1.1	1.52
484	WWT	3.16	5.07	3.94	6.03	4.12	7.17	1.25	1.19	1.3	1.41
486	YTW	4.08	5.94	4.87	7.2	4.79	8.25	1.19	1.21	1.17	1.39
487	HUK	8.53	11.15	8.33	11.96	7.08	10.89	0.98	1.07	0.83	0.98
489	HUK	5.75	7.91	6.08	9.27	5.97	8.84	1.06	1.17	1.04	1.12

Appendix C-1c (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	2.11	4.15	2.75	4.62	3.43	5.5	1.31	1.12	1.63	1.33
496	MET	4.1	6.05	4.73	7.63	4.94	7.2	1.16	1.26	1.21	1.19
499	CVD	17.2	22.23	15.72	22.71	13.17	19.24	0.91	1.02	0.77	0.87
508	AGS	0.43	0.89	0.43	0.76	0.5	0.92	0.98	0.86	1.15	1.03
509	PHS	0.3	0.65	0.26	0.56	0.39	0.75	0.88	0.86	1.3	1.15
510	AGS	0.38	0.7	0.42	0.74	0.44	0.85	1.1	1.06	1.16	1.21
512	BVH	0.5	0.95	0.58	0.93	0.62	1.12	1.14	0.98	1.24	1.19
513	AGS	0.42	0.86	0.42	0.76	0.49	0.9	0.99	0.89	1.15	1.05
514	PHS	0.43	0.92	0.55	0.86	0.61	1.08	1.27	0.94	1.41	1.17
515	BVH	0.56	1.32	0.78	1.22	0.86	1.48	1.39	0.92	1.53	1.12
516	BVH	0.36	0.74	0.48	0.72	0.46	0.83	1.32	0.97	1.27	1.13
517	FLU	0.27	0.48	0.31	0.48	0.33	0.6	1.16	0.99	1.23	1.24
518	MGS	0.28	0.55	0.31	0.53	0.3	0.57	1.12	0.96	1.09	1.03
519	NVR	0.39	0.89	0.37	0.67	0.44	0.79	0.94	0.75	1.12	0.9
520	AGS	0.34	0.73	0.32	0.59	0.38	0.71	0.95	0.81	1.13	0.96
521	POK	0.25	0.53	0.25	0.5	0.31	0.6	0.98	0.94	1.23	1.13
523	PED	0.38	0.68	0.53	0.75	0.3	0.61	1.39	1.09	0.79	0.9
524	FLU	0.18	0.37	0.2	0.4	0.18	0.34	1.11	1.08	0.99	0.91
531	GDB	0.87	1.68	1.14	1.77	1.27	2.18	1.31	1.05	1.47	1.3
532	HKR	1.93	3.67	2.51	3.98	2.91	4.88	1.3	1.08	1.51	1.33
533	HND	2.16	3.84	3.06	4.73	3.22	5.02	1.42	1.23	1.49	1.31
534	MET	2.09	3.99	3.21	4.56	2.92	4.48	1.54	1.14	1.4	1.12
536	HND	1.7	3.41	2.72	3.7	2.34	3.61	1.6	1.08	1.38	1.06
537	BVH	0.96	1.97	1.41	2.03	1.44	2.43	1.47	1.03	1.51	1.23
538	HND	1.44	2.77	2.16	3.07	1.98	3.13	1.5	1.11	1.38	1.13
539	PHS	0.86	1.81	1.27	1.84	1.36	2.31	1.47	1.02	1.57	1.28
540	KLM	1.01	2.02	1.48	2.11	1.59	2.72	1.46	1.04	1.57	1.34
543	EOR	1.13	2.19	1.65	2.46	1.64	2.63	1.47	1.13	1.46	1.2
545	IRM	0.87	1.77	1.26	1.9	1.25	2.06	1.44	1.07	1.43	1.16
547	DEL	0.95	1.79	1.37	2.02	1.22	2.03	1.43	1.13	1.28	1.14
548	BVH	0.74	1.49	1.03	1.52	0.89	1.57	1.4	1.02	1.21	1.05
549	FLU	0.45	0.96	0.62	0.93	0.55	1	1.39	0.97	1.24	1.04
551	FLU	0.7	1.23	0.99	1.35	0.61	1.16	1.42	1.1	0.87	0.95
553	ATL	1	1.62	1.34	1.79	0.76	1.42	1.34	1.1	0.77	0.87
554	ATL	1.52	2.78	1.81	3.01	1.62	3.12	1.19	1.08	1.07	1.12
555	CYG	0.58	0.85	0.87	1.04	0.22	0.6	1.5	1.22	0.38	0.71
558	DEL	1.87	3.59	2.19	3.87	2.16	4.16	1.17	1.08	1.16	1.16
559	ATL	1.35	2.06	1.14	1.93	1.2	2.39	0.84	0.94	0.89	1.16
561	ATL	1.12	1.83	1.13	1.83	0.99	1.93	1.02	1	0.89	1.05
562	BGH	1.91	3.44	1.93	3.49	1.99	3.82	1.01	1.02	1.05	1.11
563	BSK	1.21	2.01	1.52	2.18	0.97	1.85	1.26	1.08	0.8	0.92
564	LET	25.18	35.79	20.36	35.85	20.27	35	0.81	1	0.81	0.98
565	DEL	2.01	3.85	2.29	4.09	2.27	4.36	1.14	1.06	1.13	1.13
566	DEL	3.66	6.63	3.47	6.62	3.77	7.04	0.95	1	1.03	1.06
567	BSK	2.86	4.8	3.23	5.2	2.69	4.98	1.13	1.08	0.94	1.04
568	DEL	1.42	2.52	1.94	2.95	1.8	2.96	1.37	1.17	1.27	1.17
569	IRM	1.86	3.14	2.32	3.51	1.89	3.3	1.25	1.12	1.01	1.05
570	HAN	2.72	4.44	3.29	5	2.67	4.64	1.21	1.13	0.98	1.05
571	HAN	2.69	4.79	3.85	5.36	3.33	5.03	1.43	1.12	1.24	1.05
572	DVG	6.67	10.77	6.31	11.35	5.58	9.19	0.95	1.05	0.84	0.85
574	LET	4.07	6.29	4.61	6.97	3.33	6.07	1.13	1.11	0.82	0.97
575	WWT	6.17	9.92	6.45	10.65	5.64	10.39	1.05	1.07	0.91	1.05
576	DMH	4.2	6.48	4.72	7.23	3.96	6.85	1.12	1.11	0.94	1.06
577	BZR	11.16	16.71	9.89	17.09	8.48	14.35	0.89	1.02	0.76	0.86
578	HAN	4.76	7	5.1	7.79	4.73	7.83	1.07	1.11	0.99	1.12
579	LET	6.25	9.92	6.61	10.75	5.59	10.28	1.06	1.08	0.89	1.04
581	HKR	3.43	5.21	4.14	6.54	4.34	6.61	1.21	1.25	1.27	1.27

Appendix C-1c (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	3.42	5.24	4.19	6.06	4.01	6.08	1.23	1.16	1.17	1.16
583	HAN	3.63	5.55	4.39	6.49	4.22	6.38	1.21	1.17	1.16	1.15
584	DMH	2.53	4.39	3.5	4.91	3.04	4.72	1.38	1.12	1.2	1.07
589	HAN	3.97	5.78	4.57	6.69	4.46	6.73	1.15	1.16	1.12	1.16
590	CHN	7.72	10.45	7.52	10.29	6.66	10.13	0.97	0.98	0.86	0.97
591	BVL	7.89	10.46	7.72	10.75	6.38	10.19	0.98	1.03	0.81	0.97
592	FMT	8.37	10.88	8.12	11.45	6.66	10.75	0.97	1.05	0.8	0.99
593	CVD	7.95	10.43	7.85	10.95	6.14	10.17	0.99	1.05	0.77	0.98
595	ATP	6.85	8.85	7.44	9.78	5.42	9.29	1.09	1.1	0.79	1.05
596	FMT	7.52	9.4	6.72	10.26	6.07	10.12	0.89	1.09	0.81	1.08
598	FMT	7.74	9.65	6.79	10.51	6.29	10.4	0.88	1.09	0.81	1.08
599	MAB	10.59	13.47	9.69	14.27	8.67	13.61	0.91	1.06	0.82	1.01
600	CVD	9.72	11.86	8.33	12.5	7.85	12.18	0.86	1.05	0.81	1.03
601	MAB	9.53	12.39	9	12.92	7.16	11.56	0.95	1.04	0.75	0.93
602	MAB	10.5	13.53	9.71	14.18	8.31	13.09	0.93	1.05	0.79	0.97
603	MAB	11.35	14.36	9.33	14.73	9.58	14.79	0.82	1.03	0.84	1.03
605	HDY	10.64	13.71	9.18	13.65	8.11	12.7	0.86	1	0.76	0.93
606	CVD	13.66	17.68	12.3	17.75	10.19	15.33	0.9	1	0.75	0.87
607	CVD	11.94	15.82	11.09	16.38	9.51	14.46	0.93	1.04	0.8	0.91
608	MCT	9.14	12.51	8.51	13.06	7.55	12.2	0.93	1.04	0.83	0.98
609	TIY	10.13	13.08	8.74	12.37	6.7	10.55	0.86	0.95	0.66	0.81
610	BVL	12.12	16.68	10.41	16.4	10.18	16.72	0.86	0.98	0.84	1
611	HUK	9.55	12.75	8.53	12.8	7.56	12.12	0.89	1	0.79	0.95
613	CCL	6.74	9.67	6.46	10.48	6.14	10.47	0.96	1.08	0.91	1.08
615	CVD	16.93	23.9	14.23	23.75	14.5	24.62	0.84	0.99	0.86	1.03
616	CHN	12.73	16.76	10.56	16.9	10.98	17.7	0.83	1.01	0.86	1.06
617	FMT	10.22	12.74	8.17	12.86	8.25	13.14	0.8	1.01	0.81	1.03
618	CHN	9.47	11.41	7.62	11.79	7.56	11.81	0.81	1.03	0.8	1.04
619	FMT	8.59	10.68	6.95	11.14	6.92	11.29	0.81	1.04	0.81	1.06
620	MAB	8.98	11.44	7.59	11.98	7	11.59	0.84	1.05	0.78	1.01
621	TTH	8.85	11.62	7.69	12.47	7.2	12.33	0.87	1.07	0.81	1.06
622	TTH	8.98	11.84	7.87	12.66	7.17	12.27	0.88	1.07	0.8	1.04
623	ZRB	9.02	11.87	8.02	12.78	7.09	12.17	0.89	1.08	0.79	1.03
624	THA	8.72	11.93	8.04	13.26	7.21	12.88	0.92	1.11	0.83	1.08
626	SIL	9.62	11.63	8.12	11.84	6.6	10.43	0.84	1.02	0.69	0.9
627	MAB	9.71	12.03	8.21	12.28	6.94	11.07	0.85	1.02	0.71	0.92
628	BVL	10.05	12.88	8.49	13.04	7.35	11.87	0.84	1.01	0.73	0.92
629	SIL	9.61	12.1	8.12	12.28	6.93	11.07	0.85	1.01	0.72	0.91
631	MAB	9.34	12.31	7.78	12.21	7	11.22	0.83	0.99	0.75	0.91
632	MAB	13.16	17.4	10.82	17.17	9.12	15.31	0.82	0.99	0.69	0.88
633	MAB	16.25	22.05	13.39	21.83	11.92	20.44	0.82	0.99	0.73	0.93
634	MAB	10.12	13.45	8.54	13.4	7.47	12.01	0.84	1	0.74	0.89
635	MAB	11.6	15.57	9.71	15.42	8.52	14.01	0.84	0.99	0.73	0.9
637	MSN	16.47	22.19	13.52	21.99	11.95	20.49	0.82	0.99	0.73	0.92
638	ZRB	12.35	16.55	10.28	16.37	8.98	14.88	0.83	0.99	0.73	0.9
639	PUR	17.59	24.77	14.76	24.7	14.32	24.14	0.84	1	0.81	0.97
641	MAB	17.47	24.31	14.55	24.1	13.72	23.71	0.83	0.99	0.79	0.98
642	MAB	14.96	20.26	12.67	20.34	13.09	21.5	0.85	1	0.88	1.06
643	CHN	21.86	32.01	18.42	31.57	17.78	31.83	0.84	0.99	0.81	0.99
645	DLB	17.14	24.46	14.75	24.74	13.86	23.44	0.86	1.01	0.81	0.96
648	CFD	15.14	21.36	12.6	21.29	13.54	22.39	0.83	1	0.89	1.05
649	BVL	15.13	22.9	14.2	21.7	14.17	25.21	0.94	0.95	0.94	1.1
650	MAB	12.6	18.34	11.61	17.92	11.57	19.89	0.92	0.98	0.92	1.08
651	RDM	8.63	11.85	7.71	12.48	7.83	12.91	0.89	1.05	0.91	1.09
653	LET	10.99	15.86	9.31	16.19	9.86	17.26	0.85	1.02	0.9	1.09
654	PUY	6.38	9.34	6.18	10.16	5.95	10.29	0.97	1.09	0.93	1.1
655	DEL	5.84	9.27	5.15	9.33	5.53	9.87	0.88	1.01	0.95	1.06

Appendix C-1c (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	12.36	17.7	10.34	17.79	11.07	18.83	0.84	1.01	0.9	1.06
657	LET	19.92	28.55	16.9	28.43	17.17	29.08	0.85	1	0.86	1.02
658	CMY	24.16	33.51	20.64	33.39	21.78	35.37	0.85	1	0.9	1.06
659	DEL	4.56	7.25	3.96	7	4.32	7.4	0.87	0.97	0.95	1.02
660	CVD	8.01	11.15	7.49	11.77	6.92	11.46	0.94	1.06	0.86	1.03
661	RDM	11.92	17	10.71	17.05	10.78	18.26	0.9	1	0.9	1.07
663	LET	20.51	29.2	17.58	28.95	18.1	30.42	0.86	0.99	0.88	1.04
664	RDM	14.72	20.97	12.59	20.97	13.11	22.34	0.86	1	0.89	1.07
666	PUR	17.68	24.95	14.88	24.91	14.4	24.34	0.84	1	0.81	0.98
667	LET	23.09	34.02	19.43	33.77	18.42	32.88	0.84	0.99	0.8	0.97
669	LOB	0.57	0.88	0.63	0.88	0.39	0.78	1.1	1	0.68	0.88
671	PHS	0.74	1.17	0.97	1.28	0.5	0.99	1.3	1.1	0.67	0.85
672	PED	0.67	1.04	0.92	1.18	0.4	0.85	1.38	1.14	0.59	0.82
673	MMO	0.49	0.74	0.72	0.88	0.22	0.55	1.46	1.19	0.44	0.74
675	BTN	0.26	0.44	0.35	0.5	0.16	0.35	1.35	1.13	0.64	0.79
676	CYG	0.21	0.4	0.27	0.45	0.16	0.32	1.28	1.11	0.74	0.78
677	BEN	0.45	0.68	0.67	0.82	0.2	0.5	1.47	1.2	0.43	0.73
680	PNC	0.15	0.23	0.17	0.24	0.09	0.2	1.2	1.03	0.65	0.85
681	CYG	0.36	0.57	0.48	0.63	0.22	0.48	1.34	1.11	0.62	0.84
682	BEN	0.2	0.31	0.26	0.35	0.11	0.24	1.34	1.11	0.55	0.77
683	HUB	0.13	0.24	0.14	0.27	0.16	0.29	1.12	1.14	1.23	1.19
684	CAR	0.08	0.13	0.1	0.14	0.05	0.1	1.25	1.08	0.6	0.78
686	LOB	0.36	0.56	0.39	0.56	0.25	0.51	1.1	0.99	0.7	0.9
689	CAR	0.06	0.1	0.07	0.11	0.04	0.09	1.15	1.11	0.68	0.85
690	RMY	0.2	0.34	0.27	0.38	0.12	0.27	1.33	1.12	0.61	0.8
691	HUB	0.05	0.09	0.07	0.12	0.05	0.09	1.25	1.3	0.92	1
692	BTN	0.09	0.17	0.11	0.2	0.09	0.17	1.2	1.18	0.93	0.99
693	RMY	0.16	0.32	0.18	0.35	0.14	0.27	1.17	1.11	0.89	0.86
694	HUB	0.17	0.33	0.18	0.36	0.21	0.4	1.06	1.08	1.26	1.22
695	BTN	0.2	0.4	0.19	0.44	0.33	0.65	0.93	1.08	1.64	1.61
696	BTN	0.17	0.31	0.16	0.38	0.24	0.46	0.96	1.21	1.38	1.48
698	MYW	0.12	0.18	0.14	0.26	0.14	0.24	1.21	1.46	1.21	1.32
699	HUB	0.17	0.27	0.16	0.37	0.21	0.43	0.97	1.38	1.26	1.61
702	CVL	0.24	0.47	0.25	0.66	0.35	0.81	1.04	1.38	1.43	1.71
703	HGV	0.22	0.39	0.25	0.59	0.31	0.71	1.12	1.53	1.39	1.83
705	MCO	0.22	0.27	0.22	0.47	0.25	0.54	1	1.72	1.14	1.97
708	MLA	0.14	0.21	0.15	0.34	0.19	0.4	1.06	1.59	1.33	1.87
709	COA	0.12	0.22	0.14	0.36	0.2	0.42	1.16	1.59	1.58	1.88
710	COA	0.26	0.52	0.34	0.83	0.4	1.01	1.31	1.57	1.56	1.92
711	COA	0.19	0.37	0.25	0.6	0.3	0.72	1.3	1.63	1.58	1.96
715	KVG	0.27	0.59	0.41	0.98	0.46	1.23	1.51	1.66	1.68	2.08

Appendix C-1d: Annual wind erosion (t/ha) from winter wheat averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_l).

Poly #	Soil name	BL		SN_l		SN_{tp}		SN_l/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	0.6	0.45	0.15	0.19	0.21	0.16	0.25	0.43	0.34	0.35
3	DON	0.58	0.48	0.14	0.17	0.22	0.15	0.24	0.36	0.37	0.31
4	HZM	0.73	0.64	0.14	0.18	0.26	0.17	0.19	0.28	0.36	0.26
5	DON	0.71	0.63	0.13	0.17	0.24	0.15	0.18	0.27	0.34	0.25
6	ESH	0.45	0.4	0.11	0.13	0.18	0.11	0.24	0.33	0.39	0.29
7	COS	0.69	0.55	0.17	0.2	0.23	0.17	0.24	0.37	0.33	0.32
9	BBN	1.14	0.99	0.28	0.28	0.38	0.28	0.25	0.28	0.33	0.28
10	BBN	1.18	0.97	0.28	0.27	0.29	0.22	0.24	0.28	0.25	0.23
11	ESH	0.81	0.65	0.2	0.19	0.21	0.16	0.25	0.3	0.26	0.24
13	HZM	1.17	0.97	0.29	0.29	0.28	0.24	0.25	0.29	0.24	0.24
14	COS	1.41	1.23	0.37	0.34	0.45	0.34	0.26	0.28	0.32	0.28
15	ABT	1.43	1.21	0.35	0.32	0.38	0.31	0.24	0.26	0.27	0.25
19	HZM	1.42	1.21	0.34	0.32	0.38	0.3	0.24	0.26	0.27	0.25
20	LAD	1.24	0.99	0.29	0.28	0.27	0.23	0.24	0.28	0.22	0.23
22	COS	1.26	1	0.24	0.23	0.2	0.19	0.19	0.23	0.16	0.19
27	DON	1.18	0.97	0.51	0.51	0.22	0.24	0.43	0.53	0.19	0.24
28	HZM	0.75	0.61	0.18	0.21	0.25	0.19	0.24	0.34	0.33	0.3
32	HRT	1.2	0.87	0.31	0.28	0.31	0.28	0.26	0.32	0.26	0.32
33	HRT	1.19	0.89	0.3	0.28	0.29	0.26	0.25	0.31	0.25	0.3
36	COS	1.14	0.87	0.41	0.39	0.28	0.26	0.36	0.45	0.25	0.3
47	DON	0.72	0.58	0.26	0.25	0.19	0.15	0.36	0.43	0.26	0.26
48	DON	0.97	0.75	0.29	0.27	0.21	0.18	0.29	0.36	0.22	0.25
49	TAG	1.06	0.81	0.3	0.28	0.24	0.21	0.29	0.35	0.22	0.26
51	SAD	1.14	0.86	0.28	0.26	0.19	0.16	0.24	0.3	0.17	0.19
52	VVW	1.15	0.88	0.3	0.28	0.25	0.22	0.26	0.32	0.22	0.25
53	TAG	1.19	0.9	0.3	0.28	0.28	0.25	0.26	0.31	0.23	0.27
54	ESH	1.05	0.78	0.25	0.24	0.15	0.13	0.24	0.3	0.14	0.17
56	ZBR	0.45	0.36	0.18	0.16	0.14	0.11	0.39	0.46	0.31	0.31
59	FAL	0.28	0.22	0.14	0.12	0.17	0.08	0.51	0.54	0.59	0.35
60	BBN	0.16	0.12	0.12	0.09	0.19	0.05	0.78	0.78	1.21	0.39
61	RYF	0.79	0.61	0.2	0.19	0.16	0.12	0.25	0.31	0.2	0.2
62	DVS	0.35	0.27	0.12	0.12	0.13	0.11	0.35	0.43	0.39	0.39
64	JUH	0.32	0.25	0.13	0.12	0.15	0.09	0.4	0.47	0.46	0.37
68	HRT	0.49	0.38	0.15	0.14	0.16	0.12	0.3	0.37	0.31	0.31
70	JUH	0.39	0.31	0.12	0.12	0.13	0.1	0.31	0.38	0.32	0.3
71	BBN	0.65	0.5	0.16	0.16	0.15	0.11	0.25	0.32	0.23	0.23
72	BLY	0.75	0.58	0.19	0.18	0.15	0.12	0.25	0.31	0.21	0.21
73	RYF	0.58	0.48	0.14	0.15	0.17	0.12	0.24	0.31	0.3	0.25
74	JUH	0.32	0.27	0.1	0.11	0.11	0.08	0.3	0.39	0.35	0.29
75	DIG	0.22	0.18	0.09	0.08	0.09	0.06	0.39	0.45	0.41	0.33
76	JUH	0.27	0.22	0.1	0.1	0.1	0.08	0.36	0.44	0.38	0.35
77	LAD	0.25	0.21	0.09	0.09	0.1	0.07	0.36	0.43	0.39	0.32
78	ABT	0.27	0.22	0.1	0.09	0.1	0.07	0.36	0.43	0.37	0.33
80	BWY	0.16	0.13	0.07	0.06	0.06	0.05	0.4	0.44	0.4	0.42
81	HZM	0.18	0.14	0.08	0.07	0.07	0.05	0.44	0.49	0.41	0.37
83	BUD	0.12	0.09	0.06	0.05	0.06	0.04	0.53	0.59	0.47	0.48
84	HZM	0.12	0.09	0.06	0.05	0.06	0.05	0.54	0.59	0.47	0.53
87	NPA	0.21	0.18	0.11	0.1	0.11	0.08	0.51	0.55	0.52	0.42
88	FAL	0.19	0.16	0.1	0.09	0.09	0.06	0.52	0.57	0.49	0.4
89	JUH	0.51	0.41	0.15	0.18	0.21	0.15	0.29	0.43	0.4	0.37
91	HZM	0.21	0.21	0.14	0.13	0.19	0.12	0.66	0.59	0.92	0.57
93	DON	0.22	0.19	0.1	0.1	0.11	0.07	0.47	0.53	0.48	0.38
94	HRT	0.2	0.16	0.08	0.08	0.08	0.05	0.42	0.47	0.4	0.34
97	FAL	0.18	0.14	0.13	0.11	0.14	0.06	0.7	0.77	0.75	0.42
98	HZM	0.14	0.12	0.13	0.11	0.09	0.06	0.9	0.94	0.66	0.55

Appendix C-1d (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	0.16	0.12	0.17	0.15	0.09	0.06	1.06	1.22	0.56	0.49
101	FAL	0.19	0.15	0.1	0.08	0.08	0.06	0.51	0.58	0.44	0.43
102	WHW	0.13	0.09	0.08	0.06	0.06	0.05	0.6	0.68	0.46	0.52
103	ABT	0.12	0.08	0.08	0.07	0.07	0.05	0.68	0.81	0.58	0.62
104	HZM	0.12	0.09	0.09	0.08	0.07	0.05	0.75	0.85	0.59	0.6
105	CTE	0.15	0.11	0.13	0.11	0.09	0.06	0.86	0.99	0.61	0.57
107	ALC	0.18	0.15	0.1	0.09	0.1	0.07	0.54	0.59	0.56	0.46
108	HZM	0.1	0.07	0.09	0.07	0.07	0.05	0.9	1.03	0.72	0.75
109	PRV	0.11	0.08	0.1	0.08	0.08	0.06	0.9	1.01	0.73	0.7
110	CTE	0.16	0.11	0.15	0.12	0.11	0.07	0.96	1.09	0.68	0.59
112	ALC	0.13	0.09	0.11	0.08	0.09	0.06	0.85	0.96	0.68	0.68
130	DVS	0.02	0.02	0.03	0.02	0.02	0.02	1.48	1.42	1.05	1.11
132	CTE	0.02	0.02	0.04	0.03	0.03	0.03	1.93	2.02	1.55	1.79
133	BBN	0.19	0.18	0.14	0.13	0.13	0.09	0.77	0.71	0.69	0.47
135	DVS	0.21	0.19	0.13	0.11	0.16	0.08	0.64	0.61	0.75	0.4
144	BBN	0.23	0.39	0.13	0.16	0.08	0.12	0.57	0.4	0.37	0.31
170	HUB	0.04	0.07	0.03	0.03	0.01	0.03	0.8	0.44	0.26	0.35
171	HUB	0.11	0.15	0.08	0.1	0.04	0.06	0.7	0.69	0.39	0.41
172	KTH	0.09	0.08	0.02	0.04	0.02	0.03	0.25	0.47	0.2	0.37
173	CUL	0.07	0.06	0.02	0.03	0.01	0.02	0.22	0.43	0.19	0.39
176	HRT	0.33	0.23	0.03	0.09	0.05	0.08	0.09	0.37	0.15	0.35
177	HRT	0.23	0.21	0.13	0.16	0.07	0.09	0.56	0.79	0.29	0.41
178	HPE	0.29	0.25	0.25	0.29	0.09	0.1	0.88	1.16	0.32	0.42
180	KNZ	0.29	0.26	0.33	0.37	0.1	0.11	1.12	1.43	0.33	0.43
181	COS	0.33	0.31	0.48	0.52	0.1	0.12	1.43	1.7	0.31	0.4
182	ATO	0.26	0.22	0.19	0.22	0.1	0.1	0.72	1.02	0.37	0.46
185	UCS	0.27	0.22	0.12	0.16	0.08	0.1	0.45	0.73	0.31	0.44
189	CUL	0.33	0.24	0.06	0.12	0.06	0.09	0.18	0.49	0.17	0.37
192	COA	0.19	0.14	0.02	0.05	0.03	0.05	0.13	0.39	0.17	0.4
193	MLA	0.09	0.07	0.02	0.03	0.02	0.04	0.19	0.41	0.2	0.59
194	MLA	0.29	0.22	0.08	0.12	0.06	0.09	0.28	0.53	0.22	0.4
196	LNN	0.24	0.19	0.1	0.12	0.1	0.09	0.41	0.63	0.4	0.46
197	COA	0.31	0.25	0.12	0.14	0.08	0.1	0.39	0.57	0.26	0.38
198	COA	0.24	0.18	0.05	0.08	0.05	0.08	0.23	0.47	0.2	0.44
201	HRT	0.02	0.02	0	0.01	0.01	0.01	0.07	0.38	0.21	0.49
211	ZOR	0.37	0.34	0.58	0.63	0.13	0.15	1.58	1.85	0.36	0.44
212	ABC	0.33	0.3	0.51	0.56	0.16	0.17	1.57	1.86	0.5	0.56
215	ABC	0.4	0.36	0.59	0.65	0.17	0.18	1.49	1.8	0.42	0.5
218	KNZ	0.51	0.41	0.76	0.82	0.27	0.29	1.49	1.99	0.53	0.7
221	EGL	0.18	0.15	0.42	0.43	0.13	0.14	2.33	2.8	0.75	0.95
224	ABC	0.25	0.21	0.52	0.53	0.18	0.18	2.05	2.54	0.69	0.89
227	TNW	0.49	0.39	0.77	0.83	0.28	0.3	1.58	2.14	0.57	0.77
231	ABC	0.52	0.42	0.75	0.8	0.28	0.29	1.44	1.93	0.53	0.7
232	MLA	0.53	0.41	0.89	0.94	0.34	0.35	1.7	2.3	0.64	0.85
233	KNZ	0.46	0.36	0.79	0.82	0.29	0.3	1.72	2.29	0.64	0.84
236	ABC	0.22	0.18	0.36	0.37	0.12	0.13	1.59	2.05	0.54	0.7
240	KNZ	0.43	0.34	0.67	0.71	0.24	0.25	1.55	2.05	0.56	0.74
246	GDI	0.23	0.19	0.33	0.35	0.1	0.11	1.41	1.81	0.43	0.56
248	GDI	0.3	0.26	0.29	0.32	0.1	0.11	0.96	1.2	0.34	0.41
250	ABC	0.39	0.34	0.35	0.37	0.15	0.14	0.9	1.08	0.39	0.42
252	UCS	0.35	0.3	0.36	0.4	0.13	0.14	1.02	1.34	0.36	0.46
253	COD	0.35	0.3	0.31	0.35	0.13	0.14	0.87	1.18	0.37	0.47
254	PIB	0.32	0.27	0.17	0.21	0.11	0.11	0.54	0.78	0.34	0.42
258	POK	0.99	0.86	0.36	0.4	0.2	0.25	0.36	0.47	0.2	0.29
259	RDW	0.58	0.49	0.34	0.4	0.14	0.17	0.58	0.8	0.24	0.35
261	NIT	0.63	0.53	0.4	0.47	0.15	0.19	0.64	0.89	0.24	0.35
264	COA	0.46	0.39	0.45	0.54	0.13	0.17	0.97	1.41	0.28	0.43
268	KNZ	0.49	0.4	0.59	0.66	0.2	0.23	1.22	1.66	0.42	0.57

Appendix C-1d (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
271	FLU	0.53	0.46	0.44	0.48	0.16	0.18	0.83	1.05	0.3	0.4
275	RDW	0.44	0.4	0.54	0.56	0.19	0.19	1.21	1.39	0.42	0.48
279	ABC	0.41	0.36	0.43	0.44	0.18	0.16	1.06	1.22	0.45	0.45
290	ABC	0.28	0.22	0.35	0.39	0.09	0.11	1.26	1.73	0.33	0.5
291	LCY	0.62	0.46	0.89	0.99	0.19	0.25	1.44	2.16	0.31	0.55
292	TMN	0.75	0.55	0.96	1.09	0.23	0.31	1.28	1.98	0.31	0.56
296	NIT	1.42	1.31	0.86	0.98	0.3	0.38	0.6	0.75	0.21	0.29
297	GOG	0.82	0.68	0.86	0.96	0.22	0.28	1.05	1.42	0.27	0.41
301	SDN	1.06	0.98	0.66	0.74	0.25	0.3	0.63	0.76	0.24	0.3
302	LCY	1.28	1.19	0.7	0.8	0.28	0.34	0.54	0.67	0.22	0.29
306	LCY	0.47	0.43	0.37	0.39	0.18	0.16	0.8	0.92	0.39	0.38
310	FRY	0.52	0.47	0.8	0.83	0.25	0.26	1.56	1.76	0.48	0.55
311	FRY	0.4	0.36	0.64	0.65	0.21	0.2	1.61	1.84	0.53	0.57
312	FRY	0.39	0.34	0.91	0.93	0.27	0.26	2.32	2.7	0.68	0.75
315	NTW	0.64	0.5	0.45	0.54	0.2	0.25	0.71	1.07	0.31	0.49
316	LCY	0.55	0.43	0.29	0.36	0.18	0.21	0.54	0.84	0.33	0.5
317	LCY	0.8	0.67	0.69	0.79	0.22	0.28	0.85	1.19	0.28	0.42
320	FRY	0.73	0.63	0.4	0.49	0.21	0.23	0.55	0.77	0.29	0.37
322	LCY	0.51	0.44	0.14	0.24	0.1	0.14	0.27	0.54	0.19	0.31
323	LCY	0.51	0.43	0.17	0.26	0.12	0.15	0.34	0.6	0.23	0.33
325	LCY	0.63	0.56	0.31	0.38	0.16	0.19	0.5	0.69	0.25	0.34
326	LCY	1.03	0.96	0.57	0.65	0.24	0.28	0.55	0.67	0.23	0.3
334	LCY	0.42	0.39	0.55	0.55	0.19	0.2	1.3	1.4	0.45	0.52
335	FRY	0.53	0.47	0.21	0.28	0.1	0.14	0.4	0.6	0.19	0.3
337	MGS	0.36	0.31	0.13	0.14	0.1	0.11	0.36	0.45	0.27	0.37
339	LFN	0.33	0.28	0.12	0.12	0.1	0.11	0.37	0.44	0.29	0.37
341	MGS	0.43	0.39	0.2	0.24	0.11	0.13	0.46	0.61	0.25	0.34
342	LFN	0.4	0.37	0.23	0.24	0.12	0.14	0.58	0.65	0.3	0.37
343	FRY	0.36	0.34	0.23	0.22	0.12	0.13	0.64	0.65	0.33	0.39
344	BSU	0.31	0.28	0.19	0.2	0.09	0.1	0.62	0.7	0.29	0.36
345	SDN	0.28	0.25	0.2	0.2	0.08	0.09	0.72	0.81	0.3	0.37
346	PHS	0.36	0.33	0.38	0.37	0.14	0.16	1.05	1.11	0.4	0.46
347	SDN	0.32	0.28	0.76	0.77	0.21	0.22	2.41	2.74	0.65	0.76
348	SDN	0.36	0.33	0.76	0.77	0.22	0.23	2.1	2.34	0.6	0.69
350	LFN	0.26	0.23	0.78	0.79	0.18	0.21	3.05	3.4	0.72	0.91
351	LFN	0.27	0.24	0.37	0.38	0.11	0.12	1.39	1.58	0.41	0.52
352	RDW	0.23	0.21	0.28	0.28	0.08	0.1	1.19	1.35	0.34	0.47
354	BVH	0.25	0.21	0.1	0.07	0.1	0.09	0.39	0.32	0.41	0.45
356	EOR	0.46	0.38	0.17	0.17	0.14	0.15	0.38	0.44	0.3	0.39
357	EOR	0.35	0.3	0.14	0.13	0.1	0.11	0.38	0.43	0.28	0.37
359	RED	0.42	0.37	0.11	0.13	0.07	0.1	0.27	0.35	0.17	0.27
360	EOR	0.36	0.32	0.11	0.12	0.07	0.09	0.32	0.39	0.2	0.27
362	EOR	0.41	0.34	0.2	0.22	0.09	0.11	0.5	0.64	0.22	0.34
363	EOR	0.5	0.41	0.18	0.19	0.1	0.14	0.36	0.47	0.21	0.33
364	EOR	0.55	0.44	0.15	0.15	0.12	0.16	0.28	0.34	0.22	0.35
365	HND	0.74	0.61	0.2	0.21	0.15	0.2	0.27	0.35	0.21	0.32
366	DCY	0.71	0.6	0.17	0.18	0.14	0.19	0.24	0.31	0.2	0.31
367	HND	0.67	0.57	0.16	0.18	0.13	0.17	0.24	0.31	0.19	0.3
370	HND	1.53	1.32	0.35	0.4	0.31	0.37	0.23	0.3	0.2	0.28
371	WWT	1.37	1.17	0.36	0.4	0.21	0.35	0.26	0.34	0.15	0.3
372	EOR	0.87	0.76	0.23	0.25	0.14	0.2	0.26	0.33	0.17	0.27
374	EOR	0.74	0.62	0.23	0.24	0.15	0.2	0.31	0.39	0.2	0.32
375	WWT	1.18	1	0.35	0.38	0.2	0.33	0.29	0.39	0.17	0.33
376	HND	1.6	1.35	0.42	0.49	0.2	0.43	0.27	0.36	0.13	0.32
378	HND	1.74	1.46	0.39	0.45	0.16	0.48	0.22	0.31	0.09	0.33
392	AGS	0.34	0.31	0.79	0.8	0.22	0.22	2.32	2.56	0.63	0.72
393	LIZ	0.37	0.37	0.3	0.31	0.12	0.13	0.81	0.83	0.32	0.35
396	AGS	0.64	0.56	0.25	0.25	0.13	0.17	0.39	0.46	0.2	0.31

Appendix C-1d (Continued):

Poly #	Soil name	BL		SN_t		SN_{φ}		SN_t/BL		SN_{φ}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
401	MGS	1.51	1.32	0.46	0.5	0.27	0.36	0.3	0.37	0.18	0.27
403	CMO	0.34	0.33	0.24	0.24	0.09	0.1	0.72	0.74	0.26	0.31
404	AGS	0.26	0.29	0.23	0.23	0.09	0.09	0.87	0.79	0.33	0.33
405	CMO	0.31	0.3	0.54	0.54	0.15	0.16	1.72	1.81	0.5	0.55
408	AGS	0.26	0.23	0.35	0.35	0.08	0.1	1.37	1.54	0.33	0.44
409	AGS	0.26	0.21	0.14	0.14	0.04	0.06	0.54	0.64	0.16	0.3
410	UCS	0.46	0.41	0.27	0.27	0.1	0.13	0.58	0.67	0.21	0.32
411	COA	0.4	0.31	0.16	0.15	0.07	0.12	0.41	0.48	0.17	0.39
412	CMO	0.23	0.19	0.18	0.18	0.06	0.07	0.78	0.94	0.24	0.38
416	WKN	1.59	1.39	0.41	0.44	0.27	0.36	0.26	0.32	0.17	0.26
418	MMO	0.66	0.56	0.24	0.27	0.14	0.17	0.36	0.48	0.21	0.3
420	TBY	0.44	0.36	0.17	0.19	0.1	0.11	0.39	0.54	0.24	0.3
421	HND	1.74	1.5	0.46	0.53	0.32	0.4	0.26	0.35	0.19	0.27
422	HCH	3.62	3.13	1.44	1.6	0.62	0.78	0.4	0.51	0.17	0.25
423	LET	5.04	4.36	2.2	2.41	0.79	1.09	0.44	0.55	0.16	0.25
425	HND	2.79	2.38	0.81	0.97	0.46	0.58	0.29	0.41	0.17	0.25
426	MMO	0.62	0.52	0.18	0.19	0.11	0.16	0.29	0.35	0.18	0.3
428	HND	3.85	3.32	0.96	1.33	0.63	0.79	0.25	0.4	0.16	0.24
429	FLU	0.29	0.21	0.1	0.08	0.04	0.1	0.34	0.38	0.14	0.46
430	MCO	0.28	0.22	0.1	0.08	0.04	0.08	0.34	0.39	0.15	0.37
431	AGS	0.25	0.19	0.07	0.06	0.03	0.06	0.28	0.32	0.14	0.32
432	KVG	0.25	0.2	0.07	0.06	0.04	0.08	0.26	0.31	0.16	0.38
433	POK	0.21	0.16	0.05	0.05	0.04	0.07	0.25	0.32	0.2	0.44
435	BTN	0.2	0.15	0.03	0.03	0.04	0.07	0.16	0.22	0.19	0.47
437	POK	0.22	0.17	0.05	0.05	0.04	0.06	0.22	0.28	0.16	0.37
439	COA	0.42	0.35	0.21	0.21	0.08	0.12	0.5	0.58	0.19	0.33
440	COA	0.37	0.29	0.11	0.12	0.08	0.08	0.31	0.42	0.22	0.29
441	MMO	0.75	0.64	0.21	0.23	0.14	0.18	0.28	0.36	0.18	0.28
442	WTB	0.26	0.21	0.07	0.08	0.06	0.08	0.27	0.36	0.22	0.39
443	HND	1.87	1.6	0.5	0.58	0.34	0.43	0.27	0.36	0.18	0.27
444	MET	1.18	1.08	0.33	0.35	0.3	0.37	0.28	0.33	0.26	0.34
449	KUR	6.47	5.78	1.69	2.52	1.43	1.6	0.26	0.44	0.22	0.28
451	MET	5.61	5.03	1.1	1.84	1.19	1.31	0.2	0.37	0.21	0.26
452	LET	6.61	5.98	1.2	2.28	1.59	1.73	0.18	0.38	0.24	0.29
453	CHN	4.72	4.17	1.09	1.53	0.82	0.93	0.23	0.37	0.17	0.22
457	MAB	4.14	3.68	1.29	1.46	0.54	0.64	0.31	0.4	0.13	0.17
458	MAB	4.31	3.91	1.65	1.83	0.53	0.61	0.38	0.47	0.12	0.16
460	WDN	4.18	3.77	1.52	1.68	0.51	0.6	0.36	0.45	0.12	0.16
461	BVL	4.07	3.6	1.23	1.41	0.54	0.66	0.3	0.39	0.13	0.18
463	HND	3.74	3.25	0.95	1.03	0.43	0.51	0.25	0.32	0.12	0.16
466	HND	5.76	5.17	1.09	1.91	1.26	1.39	0.19	0.37	0.22	0.27
467	WWT	6.47	5.84	1.25	2.28	1.53	1.69	0.19	0.39	0.24	0.29
471	HUK	4.77	4.22	1.02	1.61	0.87	1.06	0.21	0.38	0.18	0.25
472	MAB	4.36	3.99	1.93	2.11	0.64	0.74	0.44	0.53	0.15	0.19
473	HND	4.05	3.55	1.04	1.37	0.59	0.78	0.26	0.39	0.15	0.22
474	MAB	4.18	3.76	1.46	1.71	0.61	0.77	0.35	0.45	0.15	0.2
475	BVL	3.89	3.48	1.32	1.61	0.56	0.8	0.34	0.46	0.14	0.23
476	MAB	4.27	3.85	1.9	2.13	0.7	0.86	0.45	0.55	0.16	0.22
478	CCL	3.55	3.09	0.91	1.27	0.46	0.76	0.26	0.41	0.13	0.24
480	HUK	3.86	3.28	0.69	1.15	0.44	0.63	0.18	0.35	0.11	0.19
481	YTW	3.7	3.1	0.56	1	0.33	0.5	0.15	0.32	0.09	0.16
484	WWT	2.8	2.39	0.61	0.83	0.38	0.51	0.22	0.35	0.14	0.21
486	YTW	3.29	2.82	0.71	1.02	0.4	0.6	0.22	0.36	0.12	0.21
487	HUK	5.31	5.01	2.18	2.52	1.19	1.53	0.41	0.5	0.22	0.31
489	HUK	3.78	3.47	1.23	1.56	0.69	1.04	0.33	0.45	0.18	0.3
494	LHD	1.88	1.7	0.52	0.59	0.4	0.5	0.28	0.35	0.21	0.29
496	MET	2.77	2.48	0.88	1.15	0.35	0.66	0.32	0.46	0.13	0.26
499	CVD	11.08	10.88	4.18	4.97	3.57	4.45	0.38	0.46	0.32	0.41

Appendix C-1d (Continued):

Poly #	Soil name	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
508	AGS	0.24	0.19	0.06	0.06	0.04	0.06	0.27	0.34	0.17	0.29
509	PHS	0.19	0.14	0.04	0.04	0.03	0.05	0.23	0.29	0.16	0.38
510	AGS	0.25	0.2	0.08	0.09	0.05	0.07	0.34	0.44	0.22	0.36
512	BVH	0.31	0.26	0.09	0.09	0.06	0.08	0.27	0.35	0.2	0.3
513	AGS	0.24	0.19	0.07	0.07	0.04	0.06	0.29	0.37	0.18	0.31
514	PHS	0.31	0.26	0.09	0.09	0.05	0.07	0.28	0.36	0.16	0.26
515	BVH	0.43	0.39	0.16	0.17	0.06	0.09	0.37	0.43	0.13	0.22
516	BVH	0.27	0.23	0.14	0.15	0.04	0.05	0.53	0.65	0.14	0.23
517	FLU	0.19	0.15	0.05	0.06	0.03	0.04	0.28	0.36	0.16	0.25
518	MGS	0.21	0.17	0.09	0.1	0.02	0.04	0.42	0.56	0.12	0.25
519	NVR	0.21	0.16	0.06	0.06	0.03	0.04	0.29	0.36	0.13	0.26
520	AGS	0.2	0.16	0.06	0.06	0.03	0.04	0.31	0.4	0.15	0.28
521	POK	0.19	0.15	0.05	0.06	0.02	0.05	0.28	0.4	0.12	0.31
523	PED	0.29	0.26	0.32	0.34	0.03	0.05	1.1	1.3	0.1	0.18
524	FLU	0.19	0.16	0.05	0.07	0.01	0.04	0.24	0.41	0.05	0.22
531	GDB	0.6	0.5	0.16	0.17	0.14	0.17	0.27	0.34	0.24	0.35
532	HKR	1.65	1.45	0.43	0.51	0.33	0.42	0.26	0.35	0.2	0.29
533	HND	1.92	1.67	0.58	0.62	0.29	0.37	0.3	0.37	0.15	0.22
534	MET	1.81	1.6	0.62	0.65	0.23	0.3	0.34	0.41	0.13	0.19
536	HND	1.41	1.25	0.55	0.56	0.19	0.23	0.39	0.45	0.13	0.18
537	BVH	0.71	0.62	0.25	0.27	0.14	0.18	0.35	0.44	0.2	0.29
538	HND	1.08	0.98	0.52	0.53	0.15	0.19	0.48	0.54	0.14	0.19
539	PHS	0.63	0.52	0.18	0.19	0.14	0.18	0.28	0.37	0.22	0.35
540	KLM	0.72	0.59	0.19	0.21	0.18	0.23	0.27	0.36	0.25	0.39
543	EOR	0.76	0.69	0.39	0.39	0.1	0.14	0.51	0.57	0.13	0.19
545	IRM	0.59	0.54	0.33	0.34	0.08	0.11	0.56	0.63	0.13	0.2
547	DEL	0.63	0.58	0.48	0.49	0.08	0.11	0.77	0.85	0.13	0.19
548	BVH	0.53	0.5	0.39	0.4	0.07	0.1	0.73	0.8	0.13	0.19
549	FLU	0.34	0.3	0.24	0.25	0.04	0.06	0.69	0.82	0.12	0.21
551	FLU	0.49	0.46	0.57	0.59	0.06	0.08	1.17	1.3	0.13	0.17
553	ATL	0.72	0.68	0.96	0.97	0.11	0.13	1.33	1.43	0.15	0.19
554	ATL	0.8	0.69	0.47	0.48	0.12	0.14	0.6	0.7	0.14	0.21
555	CYG	0.4	0.37	0.74	0.76	0.04	0.04	1.85	2.08	0.1	0.11
558	DEL	0.85	0.75	0.34	0.36	0.13	0.16	0.4	0.48	0.15	0.22
559	ATL	0.86	0.64	0.26	0.27	0.1	0.12	0.31	0.43	0.11	0.19
561	ATL	0.67	0.56	0.41	0.42	0.09	0.11	0.61	0.75	0.13	0.2
562	BGH	0.93	0.83	0.38	0.4	0.13	0.18	0.41	0.49	0.14	0.22
563	BSK	0.81	0.75	0.99	0.99	0.13	0.15	1.22	1.32	0.16	0.2
564	LET	8.06	11.69	4.96	5.05	2.99	3.49	0.62	0.43	0.37	0.3
565	DEL	0.89	0.82	0.42	0.43	0.14	0.18	0.47	0.53	0.15	0.22
566	DEL	1.51	1.6	0.62	0.65	0.26	0.37	0.41	0.41	0.17	0.23
567	BSK	1.57	1.63	1.07	1.09	0.25	0.32	0.68	0.67	0.16	0.19
568	DEL	0.87	0.83	0.61	0.61	0.12	0.16	0.71	0.74	0.14	0.19
569	IRM	1.15	1.15	0.92	0.93	0.17	0.21	0.81	0.81	0.15	0.18
570	HAN	1.64	1.76	1.22	1.22	0.25	0.3	0.74	0.69	0.15	0.17
571	HAN	2.12	1.92	0.85	0.89	0.29	0.36	0.4	0.46	0.13	0.19
572	DVG	4.39	5.4	2.13	2.34	1.21	1.42	0.48	0.43	0.28	0.26
574	LET	2.46	2.78	2.01	2	0.39	0.44	0.82	0.72	0.16	0.16
575	WWT	3.11	3.33	1.4	1.46	0.55	0.75	0.45	0.44	0.18	0.23
576	DMH	2.42	2.57	1.52	1.54	0.39	0.47	0.63	0.6	0.16	0.18
577	BZR	6.51	8.13	3.78	4.06	1.76	2.1	0.58	0.5	0.27	0.26
578	HAN	2.61	2.65	1.35	1.42	0.46	0.55	0.52	0.54	0.18	0.21
579	LET	3.31	3.54	1.6	1.66	0.57	0.77	0.48	0.47	0.17	0.22
581	HKR	2.6	2.33	0.89	1.01	0.4	0.56	0.34	0.43	0.16	0.24
582	HAN	2.32	2.13	1.09	1.17	0.36	0.46	0.47	0.55	0.16	0.22
583	HAN	2.51	2.31	1.04	1.16	0.4	0.55	0.41	0.5	0.16	0.24
584	DMH	1.81	1.69	0.9	0.92	0.24	0.29	0.5	0.55	0.13	0.17
589	HAN	2.51	2.33	1.21	1.33	0.42	0.55	0.48	0.57	0.17	0.24

Appendix C-1d (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
590	CHN	4.23	3.9	1.96	2.08	0.4	0.42	0.46	0.53	0.09	0.11
591	BVL	4.42	4.16	2.1	2.24	0.63	0.7	0.48	0.54	0.14	0.17
592	FMT	4.46	4.29	2.08	2.21	0.75	0.83	0.47	0.52	0.17	0.19
593	CVD	4.41	4.13	2.1	2.22	0.68	0.74	0.48	0.54	0.15	0.18
595	ATP	3.58	2.88	0.92	1.01	0.25	0.3	0.26	0.35	0.07	0.1
596	FMT	2.87	2.8	1.03	1.1	0.24	0.3	0.36	0.39	0.08	0.11
598	FMT	2.86	2.88	1.09	1.17	0.27	0.33	0.38	0.41	0.09	0.12
599	MAB	5.21	5.69	2.75	2.87	1.21	1.28	0.53	0.5	0.23	0.23
600	CVD	3.69	4.04	2.2	2.3	0.6	0.67	0.6	0.57	0.16	0.17
601	MAB	5.43	5.38	2.74	2.95	1.23	1.41	0.5	0.55	0.23	0.26
602	MAB	5.64	5.97	2.92	3.09	1.37	1.51	0.52	0.52	0.24	0.25
603	MAB	3.16	3.86	2.05	2.26	0.63	0.79	0.65	0.58	0.2	0.2
605	HDY	4.67	5.13	2.7	2.89	1.08	1.25	0.58	0.56	0.23	0.24
606	CVD	8.12	8.18	3.55	4.05	2.38	2.93	0.44	0.49	0.29	0.36
607	CVD	7.22	7.2	2.8	3.27	2.11	2.62	0.39	0.45	0.29	0.36
608	MCT	4.84	5.04	1.9	2.17	1.25	1.53	0.39	0.43	0.26	0.3
609	TIY	5.49	5.8	3.24	3.43	1.27	1.49	0.59	0.59	0.23	0.26
610	BVL	3.51	4.61	1.96	2.25	0.92	1.14	0.56	0.49	0.26	0.25
611	HUK	4.18	4.59	2.02	2.21	0.97	1.16	0.48	0.48	0.23	0.25
613	CCL	3.05	3.35	0.96	1.09	0.61	0.72	0.31	0.33	0.2	0.22
615	CVD	3.48	5.77	1.97	2.5	1.16	1.47	0.57	0.43	0.33	0.25
616	CHN	2.62	4.09	1.57	1.89	0.57	0.73	0.6	0.46	0.22	0.18
617	FMT	2.74	3.42	1.78	1.92	0.3	0.39	0.65	0.56	0.11	0.11
618	CHN	2.92	3.35	1.99	2.08	0.26	0.33	0.68	0.62	0.09	0.1
619	FMT	2.81	3.12	1.49	1.58	0.23	0.3	0.53	0.51	0.08	0.1
620	MAB	4.15	4.34	2.38	2.49	0.39	0.46	0.57	0.57	0.09	0.11
621	TTH	4.19	4.3	2.54	2.63	0.29	0.39	0.61	0.61	0.07	0.09
622	TTH	4.62	4.7	2.84	2.93	0.35	0.44	0.61	0.62	0.08	0.09
623	ZRB	5.29	5.26	3.16	3.26	0.45	0.53	0.6	0.62	0.09	0.1
624	THA	5.38	5.23	3.34	3.43	0.34	0.46	0.62	0.65	0.06	0.09
626	SIL	6.47	6.46	3.39	3.53	0.88	0.86	0.52	0.55	0.14	0.13
627	MAB	5.67	5.82	3.15	3.29	0.74	0.75	0.56	0.56	0.13	0.13
628	BVL	4.94	5.3	3.02	3.17	0.63	0.67	0.61	[illegible]	0.13	0.13
629	SIL	5.16	5.38	3.07	3.2	0.64	0.66	0.6	0.59	0.12	0.12
631	MAB	3.28	3.78	2.57	2.68	0.3	0.36	0.78	0.71	0.09	0.1
632	MAB	3.92	5.56	3.19	3.35	0.34	0.46	0.81	0.6	0.09	0.08
633	MAB	4.7	6.89	3.33	3.62	0.82	1.02	0.71	0.53	0.17	0.15
634	MAB	3.88	4.5	3	3.13	0.45	0.52	0.77	0.7	0.12	0.12
635	MAB	3.78	4.87	3.01	3.19	0.45	0.55	0.8	0.65	0.12	0.11
637	MSN	4.84	7.06	3.39	3.67	0.81	1.01	0.7	0.52	0.17	0.14
638	ZRB	3.9	5.2	3.07	3.26	0.48	0.59	0.79	0.63	0.12	0.11
639	PUR	5.73	7.57	3.61	4	1.64	1.91	0.63	0.53	0.29	0.25
641	MAB	4.38	6.84	2.81	3.26	1.1	1.36	0.64	0.48	0.25	0.2
642	MAB	2.75	4.96	1.49	1.93	0.81	1	0.54	0.39	0.3	0.2
643	CHN	4.96	8.22	2.86	3.63	1.83	2.29	0.58	0.44	0.37	0.28
645	DLB	6.22	7.89	3.84	4.18	1.92	2.24	0.62	0.53	0.31	0.28
648	CFD	2.91	4.53	1.6	2.05	0.96	1.29	0.55	0.45	0.33	0.29
649	BVL	2.64	5.44	1.52	1.92	0.97	1.18	0.57	0.35	0.37	0.22
650	MAB	2.78	4.57	1.33	1.62	0.82	1	0.48	0.36	0.3	0.22
651	RDM	2.56	3.19	0.88	0.99	0.55	0.67	0.34	0.31	0.22	0.21
653	LET	2.94	4.37	1.34	1.49	0.9	1.12	0.46	0.34	0.3	0.26
654	PUY	2.88	3.21	0.94	1.06	0.56	0.68	0.33	0.33	0.2	0.21
655	DEL	2.09	2.55	0.77	0.85	0.47	0.63	0.37	0.33	0.23	0.25
656	PUY	3.72	5.65	1.7	1.88	1.18	1.41	0.46	0.33	0.32	0.25
657	LET	6.45	9.79	3.29	3.59	2.18	2.53	0.51	0.37	0.34	0.26
658	CMY	8.39	12.97	3.62	3.99	2.63	2.97	0.43	0.31	0.31	0.23
659	DEL	1.99	2.27	0.64	0.71	0.42	0.55	0.32	0.31	0.21	0.24
660	CVD	3.7	3.99	1.37	1.55	0.84	1.03	0.37	0.39	0.23	0.26

Appendix C-1d (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
661	RDM	3.14	4.64	1.33	1.55	0.87	1.04	0.42	0.33	0.28	0.22
663	LET	6.39	9.94	3.07	3.41	2.1	2.43	0.48	0.34	0.33	0.24
664	RDM	4.04	6.32	1.9	2.14	1.29	1.53	0.47	0.34	0.32	0.24
666	PUR	5.31	7.09	3.35	3.7	1.55	1.81	0.63	0.52	0.29	0.26
667	LET	7.04	10.08	4.23	4.86	2.5	3	0.6	0.48	0.36	0.3
669	LOB	0.38	0.32	0.38	0.39	0.04	0.07	0.98	1.2	0.12	0.2
671	PHS	0.53	0.49	0.72	0.73	0.07	0.09	1.36	1.51	0.14	0.18
672	PED	0.47	0.43	0.7	0.72	0.06	0.07	1.5	1.67	0.12	0.16
673	MMO	0.34	0.31	0.59	0.61	0.03	0.04	1.72	1.97	0.1	0.13
675	BTN	0.21	0.19	0.23	0.24	0.02	0.03	1.06	1.28	0.08	0.18
676	CYG	0.21	0.18	0.14	0.16	0.01	0.03	0.66	0.86	0.06	0.18
677	BEN	0.32	0.29	0.55	0.57	0.03	0.04	1.7	1.94	0.1	0.13
680	PNC	0.1	0.08	0.1	0.11	0.01	0.02	1.09	1.37	0.11	0.27
681	CYG	0.25	0.22	0.34	0.35	0.03	0.04	1.37	1.63	0.11	0.18
682	BEN	0.15	0.13	0.19	0.2	0.02	0.03	1.31	1.56	0.1	0.21
683	HUB	0.1	0.07	0.03	0.04	0.01	0.03	0.36	0.57	0.13	0.4
684	CAR	0.06	0.05	0.07	0.07	0.01	0.02	1.16	1.46	0.13	0.37
686	LOB	0.24	0.19	0.22	0.23	0.03	0.04	0.92	1.19	0.11	0.22
689	CAR	0.04	0.03	0.04	0.04	0	0.01	1.02	1.26	0.09	0.32
690	RMY	0.16	0.14	0.18	0.2	0.01	0.03	1.13	1.37	0.09	0.21
691	HUB	0.04	0.03	0.03	0.03	0	0.01	0.78	1.18	0.08	0.46
692	BTN	0.08	0.06	0.05	0.05	0.01	0.02	0.59	0.83	0.1	0.33
693	RMY	0.16	0.14	0.06	0.08	0.01	0.03	0.34	0.53	0.05	0.21
694	HUB	0.13	0.1	0.04	0.05	0.02	0.04	0.32	0.49	0.12	0.36
695	BTN	0.15	0.11	0.02	0.02	0.03	0.06	0.15	0.22	0.19	0.51
696	BTN	0.11	0.08	0.02	0.02	0.02	0.04	0.18	0.32	0.2	0.54
698	MYW	0.06	0.04	0.01	0.02	0.01	0.02	0.24	0.54	0.2	0.66
699	HUB	0.1	0.07	0.02	0.03	0.02	0.04	0.23	0.42	0.2	0.57
702	CVL	0.19	0.15	0.04	0.05	0.04	0.06	0.24	0.33	0.23	0.44
703	HGV	0.16	0.12	0.04	0.04	0.03	0.05	0.25	0.37	0.21	0.46
705	MCO	0.1	0.06	0.03	0.03	0.02	0.03	0.3	0.5	0.2	0.5
708	MLA	0.09	0.06	0.02	0.03	0.02	0.04	0.25	0.48	0.22	0.63
709	COA	0.1	0.08	0.03	0.03	0.02	0.06	0.3	0.42	0.21	0.84
710	COA	0.24	0.19	0.06	0.07	0.05	0.07	0.26	0.37	0.22	0.39
711	COA	0.18	0.14	0.05	0.06	0.04	0.07	0.3	0.43	0.22	0.52
715	KVG	0.32	0.25	0.11	0.12	0.07	0.09	0.34	0.49	0.23	0.34

Appendix C-2a: Annual water residue (t/ha) from continuous wheat averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{lp}, SN_l).

Poly #	Soil name	BL		SN_l		SN_{lp}		SN_l/BL		SN_{lp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	1.35	1.56	4.1	4.57	5.14	5.7	3.04	2.94	3.81	3.66
3	DON	1.02	1.17	2.92	3.21	3.74	4.15	2.87	2.75	3.68	3.55
4	HZM	1.08	1.25	3.17	3.44	4.13	4.59	2.93	2.75	3.82	3.67
5	DON	0.96	1.11	2.83	3.05	3.72	4.13	2.95	2.74	3.88	3.71
6	ESH	0.77	0.88	2.04	2.2	2.7	2.99	2.63	2.5	3.48	3.38
7	COS	1.19	1.37	3.46	3.84	4.36	4.84	2.9	2.8	3.66	3.52
9	BBN	0.73	0.83	1.79	1.95	2.33	2.57	2.47	2.35	3.2	3.09
10	BBN	0.4	0.46	0.79	0.84	1.07	1.17	1.97	1.85	2.67	2.55
11	ESH	0.33	0.38	0.65	0.69	0.89	0.96	1.95	1.84	2.68	2.55
13	HZM	0.77	0.86	0.89	0.96	1.17	1.28	1.15	1.12	1.52	1.49
14	COS	0.53	0.6	0.89	0.95	1.17	1.28	1.67	1.59	2.2	2.14
15	ABT	0.5	0.56	0.53	0.56	0.71	0.77	1.06	1	1.41	1.37
19	HZM	0.46	0.51	0.5	0.53	0.68	0.73	1.1	1.04	1.48	1.43
20	LAD	0.42	0.46	0.4	0.43	0.56	0.6	0.97	0.92	1.35	1.29
22	COS	0.47	0.52	0.32	0.33	0.44	0.45	0.68	0.64	0.93	0.87
27	DON	1.35	1.48	0.41	0.43	0.59	0.62	0.31	0.29	0.44	0.42
28	HZM	1.07	1.23	2.95	3.27	3.74	4.15	2.76	2.67	3.5	3.38
32	HRT	0.38	0.41	0.25	0.26	0.37	0.38	0.65	0.63	0.97	0.93
33	HRT	0.4	0.43	0.29	0.31	0.42	0.44	0.72	0.71	1.06	1.02
36	COS	0.67	0.74	0.32	0.34	0.49	0.51	0.48	0.46	0.72	0.69
47	DON	0.68	0.77	0.56	0.6	0.85	0.93	0.82	0.78	1.26	1.22
48	DON	0.45	0.5	0.35	0.37	0.53	0.56	0.78	0.75	1.16	1.11
49	TAG	0.43	0.48	0.31	0.33	0.47	0.49	0.72	0.69	1.07	1.02
51	SAD	0.28	0.31	0.28	0.29	0.41	0.43	0.99	0.93	1.49	1.39
52	VVW	0.4	0.44	0.36	0.38	0.52	0.55	0.9	0.87	1.29	1.24
53	TAG	0.45	0.49	0.34	0.36	0.49	0.51	0.76	0.74	1.09	1.05
54	ESH	0.22	0.25	0.24	0.25	0.37	0.38	1.08	0.99	1.68	1.53
56	ZBR	0.57	0.64	0.56	0.6	0.84	0.91	0.97	0.94	1.46	1.42
59	FAL	0.42	0.47	0.4	0.43	0.65	0.7	0.96	0.91	1.57	1.48
60	BBN	0.3	0.33	0.31	0.31	0.52	0.54	1.04	0.94	1.74	1.61
61	RYF	0.26	0.3	0.37	0.4	0.55	0.59	1.42	1.34	2.11	1.98
62	DVS	0.41	0.46	0.42	0.46	0.69	0.72	1.03	1	1.67	1.58
64	JUH	0.36	0.41	0.39	0.42	0.64	0.67	1.08	1.05	1.75	1.66
68	HRT	0.37	0.42	0.43	0.47	0.67	0.71	1.15	1.11	1.8	1.71
70	JUH	0.29	0.33	0.39	0.42	0.59	0.62	1.33	1.28	2.02	1.9
71	BBN	0.27	0.31	0.44	0.47	0.64	0.68	1.62	1.54	2.35	2.22
72	BLY	0.27	0.31	0.42	0.45	0.62	0.66	1.55	1.46	2.27	2.13
73	RYF	0.44	0.5	1.07	1.15	1.44	1.58	2.45	2.3	3.29	3.15
74	JUH	0.26	0.3	0.55	0.59	0.76	0.81	2.11	1.99	2.9	2.74
75	DIG	0.42	0.47	0.68	0.74	0.97	1.06	1.6	1.59	2.3	2.27
76	JUH	0.29	0.32	0.36	0.39	0.56	0.59	1.25	1.21	1.94	1.84
77	LAD	0.34	0.37	0.55	0.6	0.79	0.85	1.63	1.6	2.35	2.28
78	ABT	0.32	0.35	0.42	0.46	0.64	0.68	1.34	1.3	2.03	1.95
80	BWY	0.27	0.3	0.31	0.33	0.52	0.55	1.13	1.12	1.92	1.85
81	HZM	0.32	0.35	0.37	0.41	0.6	0.64	1.14	1.15	1.83	1.79
83	BUD	0.29	0.32	0.32	0.35	0.54	0.57	1.09	1.1	1.82	1.78
84	HZM	0.28	0.31	0.31	0.33	0.52	0.54	1.09	1.09	1.83	1.78
87	NPA	0.45	0.49	0.72	0.78	1.01	1.1	1.6	1.6	2.25	2.27
88	FAL	0.43	0.47	0.64	0.7	0.92	1.01	1.49	1.49	2.13	2.15
89	JUH	1.08	1.24	3.12	3.47	3.94	4.37	2.89	2.8	3.65	3.52
91	HZM	0.41	0.45	0.62	0.68	0.88	0.96	1.51	1.52	2.13	2.14
93	DON	0.49	0.53	0.86	0.93	1.19	1.31	1.75	1.74	2.42	2.45
94	HRT	0.4	0.44	0.58	0.64	0.85	0.93	1.45	1.45	2.12	2.1
97	FAL	0.3	0.33	0.33	0.34	0.53	0.56	1.07	1.02	1.76	1.67
98	HZM	0.34	0.37	0.32	0.34	0.51	0.53	0.95	0.92	1.5	1.44

Appendix C-2a (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	0.27	0.28	0.26	0.27	0.43	0.44	0.97	0.95	1.6	1.59
101	FAL	0.29	0.32	0.32	0.34	0.54	0.56	1.1	1.08	1.83	1.77
102	WHW	0.25	0.27	0.27	0.28	0.47	0.48	1.05	1.04	1.84	1.78
103	ABT	0.31	0.33	0.32	0.34	0.51	0.54	1.03	1.03	1.65	1.64
104	HZM	0.31	0.32	0.31	0.33	0.5	0.53	1.03	1.03	1.64	1.62
105	CTE	0.31	0.33	0.33	0.34	0.51	0.53	1.07	1.05	1.64	1.62
107	ALC	0.41	0.45	0.65	0.71	0.92	1	1.57	1.56	2.22	2.21
108	HZM	0.32	0.34	0.31	0.33	0.48	0.51	0.97	0.97	1.48	1.49
109	PRV	0.32	0.34	0.31	0.33	0.47	0.5	0.98	0.97	1.5	1.49
110	CTE	0.31	0.33	0.33	0.33	0.49	0.5	1.04	1.02	1.57	1.53
112	ALC	0.33	0.35	0.33	0.35	0.5	0.53	1.01	1.01	1.54	1.54
130	DVS	0.14	0.15	0.1	0.11	0.17	0.2	0.75	0.75	1.25	1.31
132	CTE	0.21	0.23	0.14	0.16	0.23	0.25	0.69	0.7	1.1	1.1
133	BBN	0.79	0.91	0.74	0.8	1.17	1.28	0.93	0.87	1.48	1.41
135	DVS	0.6	0.69	0.57	0.61	0.91	0.99	0.94	0.88	1.51	1.43
144	BBN	2.99	3.51	2.72	2.99	4.25	4.8	0.91	0.85	1.42	1.37
170	HUB	10.01	11.8	9.19	10.24	14.1	16.24	0.92	0.87	1.41	1.38
171	HUB	4.73	5.52	4.22	4.61	6.77	7.56	0.89	0.83	1.43	1.37
172	KTH	4.07	4.7	3.54	3.84	5.68	6.31	0.87	0.82	1.4	1.34
173	CUL	4.05	4.67	3.52	3.8	5.68	6.28	0.87	0.81	1.4	1.34
176	HRT	1.42	1.6	1.07	1.14	1.93	2.13	0.76	0.71	1.36	1.33
177	HRT	2.68	3.12	2.13	2.29	3.66	4.03	0.79	0.74	1.36	1.29
178	HPE	1.73	1.97	0.76	0.81	1.48	1.6	0.44	0.41	0.85	0.81
180	KNZ	1.77	2.04	1.1	1.18	1.91	2.1	0.62	0.58	1.08	1.03
181	COS	1.33	1.54	0.95	1.01	1.63	1.8	0.71	0.66	1.23	1.17
182	ATO	1.94	2.2	0.68	0.72	1.24	1.34	0.35	0.33	0.64	0.61
185	UCS	1.96	2.22	0.82	0.87	1.52	1.65	0.42	0.39	0.77	0.75
189	CUL	1.42	1.61	1.03	1.1	1.88	2.07	0.72	0.68	1.32	1.28
192	COA	3.2	3.7	2.66	2.89	4.58	5.07	0.83	0.78	1.43	1.37
193	MLA	4.76	5.55	3.91	4.27	7.07	7.78	0.82	0.77	1.48	1.4
194	MLA	1.96	2.25	1.19	1.28	2.32	2.53	0.61	0.57	1.18	1.12
196	LNN	2.16	2.42	0.39	0.41	0.85	0.9	0.18	0.17	0.4	0.37
197	COA	1.94	2.22	1.1	1.18	2.36	2.54	0.57	0.53	1.22	1.14
198	COA	2.17	2.5	1.61	1.74	3.08	3.38	0.74	0.7	1.42	1.35
201	HRT	4.47	5.16	3.91	4.22	6.37	7.01	0.87	0.82	1.42	1.36
211	ZOR	0.75	0.88	0.58	0.61	1	1.1	0.76	0.7	1.32	1.25
212	ABC	0.62	0.71	0.47	0.5	0.87	0.94	0.76	0.7	1.41	1.31
215	ABC	0.64	0.74	0.44	0.46	0.79	0.85	0.68	0.62	1.23	1.15
218	KNZ	0.54	0.61	0.25	0.26	0.51	0.54	0.47	0.43	0.94	0.88
221	EGL	0.59	0.67	0.47	0.49	0.97	1.04	0.8	0.74	1.66	1.54
224	ABC	0.57	0.65	0.45	0.47	0.92	0.98	0.79	0.72	1.63	1.51
227	TNW	0.36	0.41	0.23	0.24	0.5	0.53	0.63	0.58	1.37	1.29
231	ABC	0.41	0.47	0.27	0.29	0.64	0.69	0.66	0.61	1.56	1.49
232	MLA	0.35	0.4	0.26	0.27	0.58	0.63	0.74	0.68	1.67	1.57
233	KNZ	0.43	0.49	0.32	0.34	0.7	0.75	0.75	0.69	1.62	1.52
236	ABC	0.51	0.58	0.42	0.44	0.97	1.05	0.82	0.77	1.9	1.81
240	KNZ	0.51	0.58	0.38	0.4	0.88	0.95	0.75	0.7	1.75	1.66
246	GDI	1.16	1.34	1.1	1.18	2.62	2.87	0.94	0.89	2.25	2.15
248	GDI	2.11	2.43	2.06	2.22	4.9	5.37	0.98	0.92	2.32	2.22
250	ABC	1.65	1.9	1.63	1.74	3.74	4.07	0.99	0.92	2.27	2.14
252	UCS	1.3	1.46	0.36	0.37	0.72	0.76	0.28	0.25	0.55	0.52
253	COD	1.32	1.48	0.26	0.27	0.56	0.59	0.19	0.18	0.42	0.4
254	PIB	1.7	1.9	0.28	0.29	0.67	0.69	0.16	0.15	0.39	0.36
258	POK	0.62	0.7	0.25	0.26	0.67	0.7	0.41	0.37	1.09	1
259	RDW	0.76	0.86	0.24	0.25	0.63	0.66	0.32	0.29	0.83	0.77
261	NIT	0.44	0.5	0.18	0.19	0.49	0.52	0.42	0.38	1.13	1.04
264	COA	0.27	0.3	0.15	0.15	0.4	0.42	0.55	0.5	1.5	1.39

Appendix C-2a (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	0.39	0.44	0.24	0.25	0.58	0.62	0.61	0.56	1.49	1.41
271	FLU	0.5	0.57	0.38	0.4	0.97	1.03	0.76	0.7	1.94	1.8
275	RDW	0.84	0.97	0.84	0.89	1.95	2.1	1	0.92	2.31	2.17
279	ABC	1.4	1.61	1.38	1.47	3.11	3.37	0.99	0.91	2.23	2.09
290	ABC	2.06	2.36	1.98	2.14	4.76	5.24	0.96	0.91	2.32	2.22
291	LCY	1.04	1.18	1.15	1.24	2.76	2.99	1.11	1.04	2.66	2.53
292	TMN	0.46	0.51	0.96	1	2.19	2.29	2.07	1.95	4.72	4.46
296	NIT	0.37	0.42	1.36	1.46	3.19	3.37	3.65	3.43	8.53	7.94
297	GOG	0.83	0.95	1.18	1.26	2.78	2.99	1.42	1.32	3.34	3.14
301	SDN	0.75	0.86	1.43	1.53	3.32	3.55	1.92	1.78	4.45	4.14
302	LCY	0.35	0.4	1.33	1.41	3.15	3.32	3.76	3.55	8.9	8.37
306	LCY	1.53	1.77	1.64	1.74	3.69	3.97	1.07	0.98	2.41	2.25
310	FRY	0.43	0.49	0.65	0.69	1.55	1.65	1.52	1.41	3.62	3.39
311	FRY	0.99	1.14	0.99	1.05	2.26	2.43	1.01	0.93	2.29	2.14
312	FRY	0.81	0.94	0.86	0.91	1.96	2.1	1.06	0.97	2.4	2.24
315	NTW	0.61	0.67	1.53	1.58	3.44	3.59	2.5	2.35	5.64	5.33
316	LCY	0.65	0.71	1.64	1.69	3.79	3.96	2.53	2.37	5.85	5.55
317	LCY	0.55	0.61	1.26	1.32	2.99	3.15	2.29	2.15	5.43	5.13
320	FRY	0.57	0.63	1.49	1.55	3.69	3.89	2.63	2.45	6.54	6.16
322	LCY	0.53	0.58	1.53	1.5	3.83	4.05	2.85	2.56	7.17	6.92
323	LCY	0.58	0.63	1.48	1.47	3.73	3.93	2.56	2.34	6.44	6.25
325	LCY	0.52	0.57	1.31	1.33	3.26	3.43	2.51	2.32	6.24	6
326	LCY	0.39	0.43	1.22	1.27	2.91	3.07	3.11	2.95	7.46	7.1
334	LCY	0.29	0.32	0.41	0.43	1.02	1.07	1.43	1.35	3.54	3.37
335	FRY	0.47	0.51	1.22	1.19	3.03	3.19	2.59	2.36	6.42	6.31
337	MGS	1.2	1.18	1.41	1.4	3.58	3.67	1.18	1.18	2.99	3.1
339	LFN	1.3	1.28	1.45	1.44	3.68	3.77	1.12	1.13	2.84	2.95
341	MGS	0.6	0.62	1.03	1.01	2.57	2.68	1.71	1.63	4.26	4.31
342	LFN	0.42	0.44	0.66	0.66	1.66	1.72	1.55	1.49	3.9	3.91
343	FRY	0.3	0.31	0.41	0.41	1.04	1.07	1.37	1.33	3.49	3.48
344	BSU	0.48	0.49	0.57	0.58	1.42	1.45	1.21	1.18	2.99	2.97
345	SDN	0.41	0.43	0.46	0.47	1.12	1.14	1.11	1.09	2.71	2.66
346	PHS	0.3	0.31	0.38	0.39	0.96	0.99	1.3	1.25	3.24	3.16
347	SDN	0.28	0.3	0.32	0.33	0.79	0.82	1.17	1.11	2.86	2.72
348	SDN	0.28	0.31	0.36	0.37	0.89	0.92	1.28	1.21	3.14	2.98
350	LFN	0.17	0.19	0.15	0.16	0.41	0.41	0.89	0.84	2.44	2.16
351	LFN	0.36	0.37	0.38	0.38	0.93	0.95	1.05	1.03	2.62	2.54
352	RDW	0.31	0.33	0.28	0.29	0.72	0.71	0.91	0.89	2.28	2.18
354	BVH	1.69	1.65	1.55	1.56	3.98	4.03	0.92	0.94	2.36	2.45
356	EOR	0.6	0.6	0.55	0.56	1.43	1.45	0.92	0.93	2.4	2.41
357	EOR	0.91	0.9	0.86	0.86	2.18	2.2	0.94	0.95	2.39	2.44
359	RED	0.56	0.58	0.49	0.5	1.19	1.18	0.87	0.86	2.12	2.03
360	EOR	0.61	0.63	0.56	0.57	1.37	1.37	0.91	0.9	2.24	2.19
362	EOR	0.28	0.3	0.25	0.25	0.61	0.6	0.88	0.83	2.15	2.02
363	EOR	0.23	0.25	0.21	0.21	0.51	0.51	0.92	0.84	2.2	2.06
364	EOR	0.17	0.18	0.15	0.14	0.37	0.37	0.85	0.78	2.12	2.04
365	HND	0.26	0.28	0.23	0.23	0.56	0.57	0.9	0.84	2.15	2.07
366	DCY	0.36	0.39	0.32	0.33	0.76	0.78	0.89	0.85	2.09	2.01
367	HND	0.37	0.4	0.33	0.33	0.77	0.79	0.88	0.83	2.08	1.97
370	HND	0.49	0.54	0.46	0.48	1.03	1.11	0.93	0.89	2.09	2.06
371	WWT	0.4	0.42	0.35	0.37	0.85	0.88	0.89	0.87	2.14	2.08
372	EOR	0.54	0.57	0.46	0.47	1.11	1.12	0.85	0.83	2.04	1.96
374	EOR	0.46	0.47	0.41	0.42	1.05	1.07	0.9	0.89	2.31	2.25
375	WWT	0.36	0.37	0.34	0.34	0.86	0.88	0.94	0.93	2.42	2.39
376	HND	0.27	0.29	0.26	0.27	0.66	0.68	0.95	0.92	2.4	2.36
378	HND	0.16	0.17	0.15	0.16	0.36	0.38	0.95	0.91	2.31	2.23
392	AGS	0.35	0.39	0.35	0.37	0.86	0.91	1	0.93	2.5	2.31

Appendix C-2a (Continued):

Poly #	Soil name	BL		SN_t		SN_{φ}		SN_t/BL		SN_{φ}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	0.33	0.37	0.28	0.29	0.75	0.79	0.85	0.8	2.31	2.16
396	AGS	0.92	1.07	0.74	0.78	2.12	2.2	0.8	0.73	2.29	2.04
401	MGS	0.22	0.25	0.14	0.14	0.41	0.42	0.64	0.58	1.85	1.68
403	CMO	0.24	0.27	0.2	0.21	0.61	0.62	0.84	0.78	2.52	2.29
404	AGS	0.16	0.17	0.14	0.14	0.43	0.44	0.87	0.84	2.71	2.54
405	CMO	0.25	0.28	0.23	0.24	0.63	0.65	0.94	0.87	2.55	2.33
408	AGS	0.22	0.24	0.18	0.19	0.53	0.53	0.85	0.78	2.44	2.2
409	AGS	0.7	0.79	0.59	0.6	1.56	1.6	0.84	0.76	2.22	2.04
410	UCS	0.51	0.59	0.42	0.44	1.27	1.3	0.83	0.75	2.5	2.22
411	COA	1.66	1.95	1.39	1.45	4.2	4.33	0.83	0.74	2.53	2.22
412	CMO	0.32	0.36	0.27	0.27	0.71	0.73	0.84	0.75	2.21	2.03
416	WKN	0.4	0.46	0.3	0.31	0.8	0.83	0.74	0.67	1.99	1.79
418	MMO	1.22	1.41	0.73	0.77	1.77	1.86	0.6	0.54	1.44	1.32
420	TBY	1.42	1.63	0.86	0.89	2.07	2.17	0.6	0.54	1.45	1.33
421	HND	0.54	0.59	0.52	0.54	1.22	1.29	0.96	0.92	2.27	2.2
422	HCH	0.43	0.47	0.4	0.42	0.98	1.05	0.94	0.91	2.28	2.24
423	LET	0.24	0.26	0.22	0.23	0.58	0.62	0.93	0.9	2.42	2.41
425	HND	0.85	0.94	0.84	0.9	2.07	2.19	0.99	0.96	2.43	2.33
426	MMO	1.36	1.59	1.07	1.13	2.73	2.86	0.78	0.71	2	1.8
428	HND	0.45	0.5	0.44	0.47	1.09	1.15	0.98	0.94	2.42	2.32
429	FLU	2.08	2.44	1.75	1.83	5.11	5.28	0.84	0.75	2.45	2.17
430	MCO	1.41	1.62	1.19	1.24	3.28	3.4	0.85	0.76	2.33	2.1
431	AGS	1.57	1.79	1.35	1.4	3.1	3.28	0.86	0.78	1.97	1.83
432	KVG	2.49	2.89	2.17	2.3	4.61	4.98	0.87	0.8	1.85	1.72
433	POK	3.08	3.61	2.62	2.82	5.27	5.74	0.85	0.78	1.71	1.59
435	BTN	2.47	2.86	2.2	2.35	4.32	4.75	0.89	0.82	1.75	1.66
437	POK	2.42	2.78	2.13	2.25	4.26	4.65	0.88	0.81	1.76	1.67
439	COA	0.83	0.96	0.69	0.71	2.05	2.1	0.83	0.75	2.48	2.2
440	COA	1.76	2.05	1.35	1.43	3.03	3.23	0.77	0.7	1.71	1.58
441	MMO	1.21	1.41	0.89	0.94	2.17	2.29	0.73	0.67	1.79	1.63
442	WTB	1.33	1.56	1.06	1.13	2.34	2.5	0.8	0.72	1.76	1.61
443	HND	0.64	0.7	0.63	0.66	1.52	1.61	0.98	0.94	2.37	2.28
444	MET	0.19	0.2	0.18	0.18	0.42	0.44	0.96	0.9	2.23	2.17
449	KUR	0.21	0.24	0.19	0.2	0.47	0.5	0.87	0.82	2.19	2.09
451	MET	0.14	0.17	0.12	0.13	0.27	0.29	0.84	0.74	1.83	1.71
452	LET	0.13	0.16	0.1	0.11	0.23	0.25	0.76	0.68	1.72	1.58
453	CHN	0.17	0.2	0.16	0.17	0.35	0.39	0.93	0.83	2.01	1.9
457	MAB	0.24	0.28	0.25	0.25	0.49	0.55	1.02	0.89	2.03	1.94
458	MAB	0.34	0.4	0.37	0.37	0.69	0.77	1.09	0.93	2.02	1.94
460	WDN	0.3	0.36	0.33	0.33	0.61	0.69	1.07	0.92	2.01	1.93
461	BVL	0.22	0.25	0.22	0.23	0.44	0.48	1.02	0.9	2.02	1.91
463	HND	0.16	0.2	0.16	0.16	0.33	0.37	0.95	0.81	2.02	1.91
466	HND	0.14	0.17	0.12	0.12	0.26	0.29	0.84	0.74	1.84	1.69
467	WWT	0.16	0.18	0.13	0.13	0.31	0.33	0.81	0.73	1.95	1.81
471	HUK	0.16	0.18	0.15	0.16	0.33	0.36	0.94	0.87	2.11	2
472	MAB	0.42	0.47	0.46	0.49	0.83	0.9	1.09	1.04	1.97	1.91
473	HND	0.17	0.2	0.17	0.18	0.37	0.4	1	0.91	2.12	2.03
474	MAB	0.28	0.32	0.3	0.31	0.56	0.61	1.06	0.99	2.02	1.93
475	BVL	0.24	0.27	0.26	0.28	0.49	0.53	1.06	1.04	2.03	1.97
476	MAB	0.41	0.45	0.45	0.51	0.79	0.85	1.09	1.14	1.93	1.89
478	CCL	0.15	0.16	0.15	0.16	0.32	0.35	1.04	0.98	2.19	2.11
480	HUK	0.13	0.14	0.12	0.13	0.3	0.32	1	0.96	2.4	2.36
481	YTW	0.11	0.12	0.11	0.12	0.28	0.3	0.99	0.96	2.51	2.47
484	WWT	0.27	0.3	0.27	0.29	0.67	0.71	1.03	0.97	2.51	2.38
486	YTW	0.15	0.17	0.16	0.17	0.39	0.42	1.08	1.01	2.6	2.44
487	HUK	0.29	0.31	0.3	0.34	0.58	0.62	1.07	1.11	2.03	1.98
489	HUK	0.13	0.15	0.14	0.15	0.34	0.36	1.08	1.03	2.58	2.47

Appendix C-2a (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	0.23	0.26	0.24	0.25	0.57	0.6	1.03	0.97	2.43	2.33
496	MET	0.12	0.13	0.12	0.13	0.33	0.35	1.06	1.01	2.84	2.77
499	CVD	0.07	0.08	0.06	0.08	0.16	0.17	0.91	1.01	2.24	2.18
508	AGS	1.08	1.19	0.95	0.96	2.07	2.21	0.88	0.81	1.91	1.86
509	PHS	2.68	3.07	2.39	2.52	[illegible]	5.1	0.89	0.82	1.73	1.66
510	AGS	0.38	0.42	0.33	0.32	[illegible]	0.86	0.86	0.77	2.17	2.06
512	BVH	1.15	1.25	1.03	1.03	[illegible]	2.41	0.9	0.83	1.96	1.93
513	AGS	0.93	1.02	0.81	0.82	1.79	1.9	0.87	0.8	1.93	1.86
514	PHS	1.75	1.9	1.55	1.54	3.53	3.76	0.89	0.81	2.02	1.98
515	BVH	1.8	1.97	1.53	1.5	3.83	4.05	0.85	0.76	2.12	2.06
516	BVH	2.67	2.95	2.38	2.42	4.91	5.35	0.89	0.82	1.84	1.81
517	FLU	2.59	2.82	2.36	2.39	4.9	5.29	0.91	0.85	1.89	1.88
518	MGS	4.72	5.34	4.19	4.39	7.78	8.71	0.89	0.82	1.65	1.63
519	NVR	1.58	1.74	1.4	1.42	2.92	3.13	0.88	0.82	1.85	1.8
520	AGS	2.6	2.93	2.31	2.41	4.51	4.95	0.89	0.82	1.74	1.69
521	POK	4.82	5.51	4.28	4.53	7.87	8.83	0.89	0.82	1.63	1.6
523	PED	4.52	5.14	3.98	4.2	7.3	8.23	0.88	0.82	1.62	1.6
524	FLU	9.38	10.73	8.28	8.78	14.67	16.68	0.88	0.82	1.56	1.55
531	GDB	0.28	0.31	0.25	0.24	0.64	0.67	0.87	0.78	2.23	2.18
532	HKR	0.29	0.31	0.27	0.28	0.68	0.71	0.95	0.9	2.37	2.29
533	HND	0.2	0.23	0.21	0.21	0.56	0.59	1.01	0.91	2.75	2.58
534	MET	0.21	0.23	0.19	0.19	0.6	0.64	0.9	0.83	2.8	2.76
536	HND	0.34	0.36	0.28	0.28	0.86	0.92	0.84	0.77	2.54	2.54
537	BVH	0.94	1.03	0.79	0.78	2	2.12	0.84	0.76	2.13	2.07
538	HND	0.55	0.59	0.47	0.44	1.35	1.43	0.84	0.76	2.44	2.44
539	PHS	0.9	0.99	0.76	0.76	1.85	1.97	0.85	0.77	2.05	2
540	KLM	0.38	0.41	0.32	0.31	0.82	0.87	0.83	0.76	2.15	2.09
543	EOR	0.87	0.94	0.73	0.7	1.99	2.12	0.84	0.75	2.28	2.27
545	IRM	1.31	1.42	1.1	1.08	2.79	2.98	0.84	0.76	2.14	2.09
547	DEL	1.08	1.17	0.92	0.92	2.19	2.37	0.85	0.78	2.04	2.02
548	BVH	1.58	1.74	1.34	1.34	3.18	3.4	0.85	0.77	2.01	1.96
549	FLU	2.67	2.99	2.32	2.39	4.85	5.31	0.87	0.8	1.81	1.78
551	FLU	1.38	1.53	1.19	1.23	2.56	2.79	0.87	0.8	1.86	1.82
553	ATL	0.88	0.96	0.78	0.8	1.62	1.73	0.88	0.84	1.85	1.81
554	ATL	1.49	1.78	1.48	1.75	2.33	2.75	0.99	0.98	1.56	1.55
555	CYG	1.05	1.18	0.93	0.98	1.8	1.99	0.88	0.83	1.71	1.69
558	DEL	1.8	2.17	1.81	2.2	2.64	3.23	1.01	1.01	1.46	1.49
559	ATL	4.34	5.09	4.41	5.07	6.99	8.09	1.02	0.99	1.61	1.59
561	ATL	2.16	2.56	2.17	2.53	3.45	4.04	1.01	0.99	1.6	1.58
562	BGH	3.96	4.81	4	4.86	5.74	7.06	1.01	1.01	1.45	1.47
563	BSK	1.06	1.22	1	1.14	1.75	1.96	0.94	0.93	1.65	1.61
564	LET	1.3	1.59	1.17	1.35	2.09	2.51	0.9	0.85	1.61	1.57
565	DEL	1.31	1.57	1.3	1.58	1.95	2.37	1	1.01	1.49	1.51
566	DEL	1.7	2.04	1.68	2.02	2.53	3.09	0.99	0.99	1.49	1.52
567	BSK	0.85	0.98	0.81	0.92	1.47	1.68	0.95	0.94	1.74	1.72
568	DEL	0.56	0.59	0.48	0.46	1.31	1.42	0.85	0.77	2.33	2.4
569	IRM	0.57	0.61	0.51	0.51	1.25	1.34	0.88	0.83	2.18	2.19
570	HAN	0.38	0.4	0.33	0.31	0.96	1.04	0.85	0.78	2.51	2.6
571	HAN	0.25	0.27	0.22	0.22	0.72	0.77	0.87	0.82	2.85	2.89
572	DVG	14.04	17	13.21	15.37	21.59	26.15	0.94	0.9	1.54	1.54
574	LET	0.36	0.38	0.32	0.33	0.84	0.89	0.89	0.86	2.33	2.33
575	WWT	0.47	0.52	0.44	0.48	0.99	1.1	0.95	0.93	2.11	2.11
576	DMH	0.37	0.38	0.32	0.32	0.94	1.01	0.87	0.83	2.58	2.64
577	BZR	12.46	15.05	11.6	13.53	18.9	23.01	0.93	0.9	1.52	1.53
578	HAN	0.42	0.44	0.37	0.37	1.12	1.2	0.87	0.84	2.66	2.71
579	LET	0.35	0.37	0.33	0.34	0.81	0.88	0.94	0.92	2.34	2.37
581	HKR	0.21	0.23	0.22	0.22	0.58	0.61	1.04	0.95	2.8	2.64

Appendix C-2a (Continued):

Poly #	Soil name	BL		SN_i		SN_{tp}		SN_i/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	0.37	0.39	0.32	0.32	1.01	1.07	0.86	0.82	2.72	2.76
583	HAN	0.27	0.28	0.24	0.24	0.75	0.8	0.89	0.84	2.79	2.81
584	DMH	0.38	0.4	0.32	0.31	1.01	1.08	0.85	0.79	2.66	2.71
589	HAN	0.4	0.42	0.34	0.34	1.07	1.15	0.86	0.82	2.71	2.76
590	CHN	0.47	0.55	0.52	0.51	0.96	1.08	1.11	0.94	2.05	1.97
591	BVL	0.48	0.55	0.52	0.55	0.98	1.07	1.08	1.01	2.04	1.95
592	FMT	0.51	0.57	0.52	0.57	1.06	1.14	1.02	0.99	2.1	2
593	CVD	0.56	0.63	0.58	0.64	1.16	1.25	1.04	1.02	2.07	1.98
595	ATP	0.43	0.48	0.42	0.47	1.14	1.21	0.98	0.97	2.65	2.5
596	FMT	0.8	0.88	0.74	0.81	1.95	2.13	0.93	0.92	2.45	2.42
598	FMT	0.86	0.96	0.79	0.87	2.08	2.27	0.92	0.91	2.41	2.37
599	MAB	0.74	0.86	0.69	0.76	1.47	1.57	0.93	0.89	1.99	1.82
600	CVD	0.65	0.74	0.59	0.65	1.4	1.52	0.91	0.89	2.15	2.06
601	MAB	0.49	0.55	0.51	0.58	0.97	1.03	1.03	1.05	1.97	1.86
602	MAB	0.62	0.71	0.59	0.66	1.21	1.28	0.96	0.93	1.96	1.8
603	MAB	0.28	0.31	0.25	0.27	0.59	0.63	0.9	0.88	2.13	2.03
605	HDY	0.29	0.33	0.28	0.31	0.68	0.7	0.96	0.95	2.29	2.13
606	CVD	0.16	0.17	0.16	0.18	0.39	0.4	0.98	1.01	2.44	2.33
607	CVD	0.15	0.16	0.15	0.16	0.39	0.41	0.97	0.97	2.57	2.55
608	MCT	0.18	0.19	0.18	0.19	0.48	0.51	1	0.97	2.66	2.64
609	TIY	0.18	0.19	0.18	0.2	0.54	0.55	1.02	1.05	3	2.93
610	BVL	0.12	0.13	0.11	0.12	0.31	0.33	0.94	0.95	2.65	2.58
611	HUK	0.16	0.17	0.16	0.17	0.44	0.46	0.99	0.98	2.72	2.67
613	CCL	0.15	0.16	0.17	0.16	0.45	0.48	1.07	0.98	2.9	2.89
615	CVD	0.07	0.08	0.05	0.06	0.15	0.17	0.73	0.74	2.21	2.21
616	CHN	0.29	0.32	0.24	0.27	0.62	0.68	0.85	0.83	2.16	2.11
617	FMT	0.36	0.41	0.32	0.35	0.82	0.9	0.88	0.87	2.28	2.22
618	CHN	0.69	0.78	0.61	0.68	1.5	1.66	0.89	0.87	2.17	2.11
619	FMT	1	1.13	0.9	0.99	2.25	2.49	0.9	0.88	2.24	2.2
620	MAB	1.85	2.12	1.65	1.83	3.91	4.35	0.9	0.86	2.12	2.05
621	TTH	3.54	4.09	3.11	3.45	7.21	8.03	0.88	0.84	2.04	1.97
622	TTH	3.59	4.15	3.17	3.5	7.31	8.15	0.88	0.84	2.04	1.96
623	ZRB	3.87	4.47	3.43	3.79	7.89	8.8	0.89	0.85	2.04	1.97
624	THA	5.86	6.78	5.14	5.7	11.79	13.15	0.88	0.84	2.01	1.94
626	SIL	0.3	0.36	0.4	0.42	0.97	1.07	1.3	1.18	3.19	3.01
627	MAB	0.59	0.68	0.61	0.66	1.47	1.63	1.04	0.97	2.51	2.4
628	BVL	0.66	0.76	0.64	0.7	1.56	1.73	0.97	0.92	2.37	2.29
629	SIL	0.62	0.72	0.62	0.68	1.51	1.68	1	0.94	2.43	2.34
631	MAB	0.45	0.51	0.4	0.44	1.06	1.19	0.9	0.87	2.36	2.32
632	MAB	0.17	0.19	0.15	0.16	0.44	0.49	0.89	0.83	2.58	2.56
633	MAB	0.14	0.16	0.12	0.13	0.32	0.36	0.85	0.8	2.35	2.28
634	MAB	0.49	0.56	0.45	0.49	1.16	1.3	0.92	0.87	2.35	2.3
635	MAB	0.34	0.39	0.31	0.33	0.82	0.92	0.9	0.85	2.38	2.35
637	MSN	0.11	0.13	0.09	0.1	0.25	0.28	0.84	0.78	2.38	2.27
638	ZRB	0.26	0.3	0.24	0.25	0.64	0.72	0.9	0.85	2.44	2.42
639	PUR	0.3	0.36	0.25	0.29	0.52	0.62	0.85	0.81	1.76	1.72
641	MAB	0.14	0.16	0.11	0.13	0.32	0.35	0.81	0.79	2.24	2.18
642	MAB	0.13	0.15	0.1	0.11	0.28	0.31	0.76	0.76	2.16	2.15
643	CHN	0.08	0.09	0.05	0.06	0.16	0.18	0.72	0.72	2.16	2.07
645	DLB	1.31	1.6	1.17	1.35	2.15	2.56	0.89	0.84	1.64	1.6
648	CFD	0.06	0.06	0.05	0.05	0.13	0.14	0.79	0.79	2.26	2.2
649	BVL	0.09	0.1	0.07	0.08	0.18	0.2	0.84	0.82	2	2.03
650	MAB	0.08	0.08	0.07	0.07	0.19	0.21	0.88	0.88	2.46	2.53
651	RDM	0.32	0.36	0.29	0.32	0.66	0.76	0.91	0.88	2.09	2.1
653	LET	0.9	1.05	0.82	0.93	1.66	1.94	0.91	0.88	1.85	1.85
654	PUY	0.21	0.23	0.21	0.21	0.58	0.62	1.01	0.93	2.72	2.73
655	DEL	3.09	3.7	3.03	3.61	4.64	5.65	0.98	0.98	1.5	1.53

Appendix C-2a (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	2.71	3.22	2.57	2.96	4.32	5.16	0.95	0.92	1.59	1.6
657	LET	2.75	3.32	2.57	2.98	4.3	5.18	0.94	0.9	1.56	1.56
658	CMY	0.67	0.81	0.63	0.73	1.11	1.31	0.94	0.89	1.65	1.61
659	DEL	4.05	4.78	3.89	4.53	6.15	7.32	0.96	0.95	1.52	1.53
660	CVD	0.17	0.18	0.17	0.18	0.46	0.49	1.03	0.96	2.72	2.69
661	RDM	0.28	0.33	0.26	0.29	0.55	0.63	0.91	0.87	1.96	1.94
663	LET	1.17	1.42	1.08	1.24	1.89	2.26	0.92	0.87	1.61	1.59
664	RDM	0.87	1.03	0.79	0.89	1.53	1.79	0.92	0.87	1.76	1.74
666	PUR	0.35	0.42	0.3	0.34	0.61	0.72	0.86	0.81	1.77	1.71
667	LET	0.87	1.05	0.77	0.89	1.41	1.68	0.89	0.85	1.63	1.59
669	LOB	1.11	1.26	1.06	1.14	2	2.22	0.95	0.91	1.79	1.77
671	PHS	1.13	1.26	1.03	1.08	2.03	2.22	0.91	0.86	1.8	1.77
672	PED	1.05	1.17	0.95	0.99	1.89	2.07	0.9	0.85	1.79	1.77
673	MMO	1.32	1.49	1.2	1.27	2.28	2.54	0.9	0.85	1.72	1.7
675	BTN	5.98	6.85	5.29	5.63	9.44	10.7	0.88	0.82	1.58	1.56
676	CYG	8.49	9.71	7.49	7.95	13.25	15.07	0.88	0.82	1.56	1.55
677	BEN	2.24	2.54	2	2.13	3.68	4.14	0.9	0.84	1.65	1.63
680	PNC	1.16	1.31	1.07	1.16	2	2.24	0.92	0.88	1.73	1.71
681	CYG	1.48	1.68	1.36	1.45	2.6	2.9	0.92	0.86	1.75	1.73
682	BEN	2.88	3.3	2.59	2.77	4.73	5.32	0.9	0.84	1.64	1.62
683	HUB	7.93	9.17	6.9	7.44	11.96	13.45	0.87	0.81	1.51	1.47
684	CAR	2.3	2.64	1.97	2.12	3.63	4.08	0.86	0.81	1.58	1.55
686	LOB	1.04	1.17	0.99	1.06	1.92	2.13	0.95	0.91	1.84	1.82
689	CAR	3.38	3.89	2.7	2.92	4.9	5.53	0.8	0.75	1.45	1.42
690	RMY	4.72	5.41	4.21	4.49	7.58	8.56	0.89	0.83	1.6	1.58
691	HUB	5.87	6.79	4.74	5.12	8.5	9.55	0.81	0.75	1.45	1.41
692	BTN	6.27	7.23	5.36	5.74	9.64	10.87	0.85	0.79	1.54	1.5
693	RMY	9.14	10.48	8.03	8.55	14.19	16.13	0.88	0.82	1.55	1.54
694	HUB	7.33	8.46	6.3	6.77	11.07	12.46	0.86	0.8	1.51	1.47
695	BTN	5.7	6.63	4.92	5.32	8.74	9.73	0.86	0.8	1.53	1.47
696	BTN	8.8	10.27	7.5	8.15	13.2	14.68	0.85	0.79	1.5	1.43
698	MYW	13.35	15.6	11.21	12.22	19.27	21.49	0.84	0.78	1.44	1.38
699	HUB	10.71	12.6	8.93	9.74	16.49	18.22	0.83	0.77	1.54	1.45
702	CVL	3.12	3.67	2.59	2.81	5.12	5.59	0.83	0.76	1.64	1.52
703	HGV	8.2	9.71	6.77	7.4	13.23	14.49	0.83	0.76	1.61	1.49
705	MCO	15.74	18.73	13.06	14.31	25.88	28.33	0.83	0.76	1.64	1.51
708	MLA	9.07	10.72	7.39	8.08	14.24	15.62	0.81	0.75	1.57	1.46
709	COA	4.99	5.88	4.03	4.4	7.84	8.61	0.81	0.75	1.57	1.46
710	COA	4.14	4.87	3.4	3.69	6.73	7.34	0.82	0.76	1.62	1.51
711	COA	4.84	5.7	3.92	4.28	7.79	8.53	0.81	0.75	1.61	1.5
715	KVG	1.95	2.25	1.38	1.47	2.98	3.2	0.71	0.65	1.53	1.42

Appendix C-2b: Annual water erosion (t/ha) from wheat-fallow averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Poly #	Soil name	BL		SN_t		SN_{tp}		SN/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	1.56	3.44	4.81	9.4	5.94	11.2	3.09	2.73	3.81	3.25
3	DON	1.21	2.61	3.51	6.73	4.25	8.05	2.9	2.58	3.52	3.08
4	HZM	1.31	2.8	3.89	7.34	4.6	8.77	2.97	2.62	3.51	3.14
5	DON	1.18	2.5	3.51	6.57	4.11	7.86	2.97	2.63	3.48	3.14
6	ESH	0.95	2.01	2.52	4.73	3	5.72	2.65	2.36	3.16	2.85
7	COS	1.39	3.04	4.09	7.94	5.03	9.48	2.94	2.61	3.62	3.12
9	BBN	0.87	1.82	2.18	4.13	2.63	4.95	2.5	2.27	3.02	2.72
10	BBN	0.5	0.98	0.98	1.82	1.19	2.22	1.97	1.85	2.4	2.26
11	ESH	0.42	0.83	0.8	1.5	0.99	1.85	1.92	1.8	2.37	2.23
13	HZM	0.9	1.84	1.08	2.04	1.33	2.46	1.21	1.11	1.49	1.34
14	COS	0.64	1.27	1.08	2.02	1.33	2.45	1.7	1.59	2.09	1.92
15	ABT	0.59	1.17	0.65	1.2	0.81	1.46	1.1	1.02	1.37	1.25
19	HZM	0.54	1.06	0.62	1.14	0.78	1.39	1.14	1.07	1.43	1.31
20	LAD	0.5	0.97	0.51	0.93	0.64	1.14	1.02	0.95	1.29	1.17
22	COS	0.54	1.07	0.4	0.72	0.5	0.86	0.74	0.67	0.92	0.8
27	DON	1.54	3.13	0.51	0.96	0.68	1.22	0.33	0.31	0.44	0.39
28	HZM	1.25	2.72	3.5	6.78	4.3	8.1	2.8	2.5	3.44	2.98
32	HRT	0.45	0.84	0.33	0.57	0.43	0.71	0.73	0.68	0.96	0.84
33	HRT	0.47	0.9	0.38	0.67	0.49	0.83	0.8	0.75	1.04	0.93
36	COS	0.78	1.54	0.42	0.76	0.56	0.97	0.53	0.5	0.71	0.63
47	DON	0.81	1.63	0.68	1.29	0.93	1.65	0.84	0.79	1.15	1.01
48	DON	0.55	1.07	0.45	0.84	0.59	1.07	0.83	0.79	1.08	1
49	TAG	0.52	1.01	0.41	0.74	0.53	0.94	0.78	0.73	1.01	0.93
51	SAD	0.35	0.65	0.35	0.64	0.47	0.82	1.02	0.98	1.34	1.25
52	VVW	0.48	0.93	0.46	0.84	0.59	1.04	0.96	0.9	1.23	1.12
53	TAG	0.52	1.02	0.44	0.79	0.56	0.97	0.83	0.77	1.07	0.95
54	ESH	0.28	0.53	0.31	0.56	0.41	0.73	1.08	1.06	1.45	1.38
56	ZBR	0.69	1.38	0.69	1.29	0.93	1.65	1	0.93	1.34	1.19
59	FAL	0.53	1.08	0.52	1.01	0.71	1.29	0.98	0.93	1.33	1.2
60	BBN	0.41	0.83	0.43	0.83	0.57	1.03	1.05	1	1.39	1.25
61	RYF	0.34	0.66	0.47	0.89	0.62	1.14	1.39	1.35	1.81	1.74
62	DVS	0.53	1.06	0.52	1.09	0.73	1.47	1	1.03	1.39	1.39
64	JUH	0.48	0.95	0.51	1.02	0.69	1.34	1.07	1.07	1.46	1.42
68	HRT	0.48	0.96	0.54	1.08	0.73	1.43	1.12	1.13	1.53	1.49
70	JUH	0.38	0.75	0.48	0.94	0.65	1.24	1.28	1.25	1.71	1.65
71	BBN	0.35	0.69	0.56	1.05	0.71	1.33	1.57	1.51	2.02	1.92
72	BLY	0.36	0.69	0.53	1.01	0.69	1.28	1.5	1.46	1.94	1.86
73	RYF	0.55	1.13	1.33	2.49	1.6	3.03	2.42	2.2	2.91	2.69
74	JUH	0.34	0.69	0.68	1.27	0.85	1.6	1.99	1.85	2.48	2.33
75	DIG	0.51	1.06	0.85	1.61	1.1	2.06	1.67	1.53	2.16	1.95
76	JUH	0.38	0.75	0.46	0.9	0.63	1.2	1.21	1.19	1.64	1.59
77	LAD	0.42	0.85	0.69	1.3	0.89	1.67	1.65	1.53	2.13	1.96
78	ABT	0.41	0.81	0.54	1.03	0.72	1.36	1.33	1.28	1.77	1.68
80	BWY	0.37	0.73	0.44	0.84	0.6	1.15	1.17	1.15	1.61	1.57
81	HZM	0.41	0.82	0.5	0.94	0.68	1.27	1.21	1.16	1.67	1.56
83	BUD	0.39	0.75	0.45	0.85	0.62	1.15	1.16	1.12	1.6	1.52
84	HZM	0.38	0.73	0.44	0.82	0.6	1.11	1.16	1.12	1.59	1.52
87	NPA	0.55	1.13	0.89	1.67	1.14	2.13	1.61	1.47	2.07	1.88
88	FAL	0.53	1.09	0.81	1.51	1.05	1.95	1.52	1.38	1.97	1.79
89	JUH	1.26	2.76	3.68	7.16	4.54	8.55	2.91	2.59	3.59	3.1
91	HZM	0.53	1.07	0.78	1.49	0.99	1.82	1.48	1.39	1.88	1.7
93	DON	0.6	1.26	1.06	1.98	1.34	2.52	1.75	1.58	2.22	2.01
94	HRT	0.48	0.99	0.73	1.4	0.97	1.81	1.52	1.41	2.01	1.82
97	FAL	0.41	0.79	0.44	0.83	0.6	1.09	1.08	1.04	1.46	1.37
98	HZM	0.44	0.8	0.42	0.71	0.58	0.94	0.97	0.89	1.33	1.18

Appendix C-2b (Continued):

Poly #	Soil name	BL		SN_{i}		SN_{φ}		SN/BL		SN_{φ}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	0.36	0.62	0.35	0.57	0.5	0.82	0.98	0.92	1.4	1.32
101	FAL	0.4	0.76	0.44	0.84	0.61	1.14	1.12	1.1	1.54	1.51
102	WHW	0.36	0.66	0.39	0.72	0.54	1	1.11	1.09	1.53	1.51
103	ABT	0.4	0.74	0.44	0.77	0.59	1.04	1.1	1.05	1.48	1.41
104	HZM	0.4	0.72	0.43	0.74	0.58	1	1.08	1.03	1.46	1.39
105	CTE	0.4	0.7	0.44	0.73	0.59	0.97	1.09	1.05	1.47	1.39
107	ALC	0.52	1.02	0.82	1.52	1.05	1.92	1.59	1.48	2.03	1.88
108	HZM	0.41	0.73	0.42	0.69	0.56	0.93	1.02	0.95	1.36	1.27
109	PRV	0.41	0.72	0.42	0.69	0.55	0.91	1.02	0.96	1.36	1.27
110	CTE	0.41	0.68	0.43	0.68	0.57	0.89	1.05	1.01	1.4	1.31
112	ALC	0.42	0.73	0.45	0.73	0.59	0.96	1.07	1	1.41	1.32
130	DVS	0.21	0.44	0.15	0.29	0.21	0.4	0.7	0.66	1	0.9
132	CTE	0.3	0.6	0.23	0.4	0.27	0.5	0.74	0.66	0.89	0.83
133	BBN	0.95	1.93	0.89	1.63	1.26	2.09	0.94	0.84	1.33	1.08
135	DVS	0.74	1.52	0.71	1.32	0.98	1.67	0.95	0.87	1.32	1.1
144	BBN	3.42	7.22	3.12	5.83	4.49	7.46	0.91	0.81	1.31	1.03
170	HUB	11.38	23.92	10.53	19.65	14.73	24.39	0.93	0.82	1.29	1.02
171	HUB	5.4	11.34	4.87	9.01	7.15	11.83	0.9	0.79	1.32	1.04
172	KTH	4.57	9.64	4.1	7.83	6	10.32	0.9	0.81	1.31	1.07
173	CUL	4.55	9.58	4.09	7.84	6	10.41	0.9	0.82	1.32	1.09
176	HRT	1.58	3.44	1.31	2.62	2.12	3.71	0.82	0.76	1.34	1.08
177	HRT	3.07	6.49	2.48	4.61	3.91	6.53	0.81	0.71	1.27	1.01
178	HPE	2.03	4.11	0.94	1.81	1.61	2.77	0.46	0.44	0.79	0.67
180	KNZ	2.04	4.24	1.28	2.39	2.04	3.4	0.63	0.56	1	0.8
181	COS	1.53	3.19	1.1	2.04	1.74	2.88	0.72	0.64	1.14	0.9
182	ATO	2.24	4.56	0.8	1.51	1.34	2.24	0.36	0.33	0.6	0.49
185	UCS	2.26	4.62	0.98	1.9	1.65	2.82	0.43	0.41	0.73	0.61
189	CUL	1.6	3.45	1.26	2.51	2.06	3.6	0.79	0.73	1.29	1.04
192	COA	3.67	7.69	3.2	6.18	4.9	8.51	0.87	0.8	1.33	1.11
193	MLA	5.66	11.6	4.88	9.42	7.56	13.18	0.86	0.81	1.34	1.14
194	MLA	2.31	4.74	1.52	2.97	2.53	4.47	0.66	0.63	1.1	0.94
196	LNN	2.53	5.03	0.5	0.96	0.93	1.6	0.2	0.19	0.37	0.32
197	COA	2.32	4.69	1.44	2.82	2.59	4.58	0.62	0.6	1.11	0.98
198	COA	2.55	5.27	2.02	3.99	3.37	5.95	0.79	0.76	1.32	1.13
201	HRT	5.04	10.57	4.57	8.77	6.72	11.7	0.91	0.83	1.33	1.11
211	ZOR	0.87	1.83	0.68	1.25	1.07	1.75	0.77	0.68	1.22	0.96
212	ABC	0.73	1.51	0.58	1.07	0.94	1.53	0.8	0.71	1.29	1.02
215	ABC	0.75	1.55	0.52	0.96	0.85	1.39	0.69	0.62	1.13	0.9
218	KNZ	0.64	1.29	0.31	0.6	0.56	0.94	0.49	0.46	0.88	0.72
221	EGL	0.71	1.45	0.65	1.18	1.08	1.75	0.91	0.82	1.51	1.21
224	ABC	0.69	1.41	0.62	1.13	1.02	1.67	0.89	0.8	1.48	1.19
227	TNW	0.45	0.91	0.3	0.59	0.56	0.94	0.67	0.65	1.25	1.03
231	ABC	0.53	1.1	0.37	0.75	0.71	1.26	0.69	0.68	1.34	1.14
232	MLA	0.46	0.94	0.35	0.71	0.65	1.13	0.77	0.75	1.43	1.2
233	KNZ	0.54	1.13	0.44	0.85	0.77	1.32	0.8	0.75	1.42	1.17
236	ABC	0.67	1.4	0.6	1.16	1.06	1.85	0.89	0.82	1.57	1.32
240	KNZ	0.67	1.39	0.53	1.05	0.97	1.71	0.79	0.75	1.45	1.23
246	GDI	1.64	3.47	1.63	3.21	2.86	5.09	1	0.92	1.74	1.47
248	GDI	2.98	6.34	3.02	5.96	5.32	9.53	1.01	0.94	1.79	1.5
250	ABC	2.21	4.83	2.11	4.27	4.03	7.3	0.95	0.88	1.82	1.51
252	UCS	1.5	3.03	0.43	0.81	0.78	1.3	0.29	0.27	0.52	0.43
253	COD	1.53	3.07	0.31	0.6	0.62	1.03	0.2	0.2	0.4	0.34
254	PIB	1.99	3.95	0.35	0.68	0.73	1.22	0.18	0.17	0.37	0.31
258	POK	0.74	1.49	0.33	0.64	0.74	1.24	0.45	0.43	1	0.83
259	RDW	0.9	1.81	0.31	0.62	0.7	1.18	0.34	0.34	0.77	0.65
261	NIT	0.53	1.06	0.23	0.47	0.55	0.92	0.44	0.44	1.03	0.87
264	COA	0.34	0.67	0.19	0.38	0.44	0.76	0.55	0.57	1.32	1.14

Appendix C-2b (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	0.5	1.02	0.31	0.64	0.64	1.13	0.63	0.63	1.29	1.1
271	FLU	0.66	1.36	0.5	0.99	1.06	1.83	0.76	0.73	1.61	1.34
275	RDW	1.11	2.43	1.05	2.13	2.09	3.75	0.95	0.88	1.88	1.54
279	ABC	1.82	4.04	1.64	3.37	3.33	6.07	0.9	0.84	1.83	1.5
290	ABC	2.96	6.22	3.03	5.93	5.2	9.27	1.03	0.95	1.76	1.49
291	LCY	1.5	3.12	1.77	3.4	3	5.34	1.18	1.09	2	1.71
292	TMN	0.74	1.4	1.57	2.8	2.38	4.19	2.12	2	3.21	3
296	NIT	0.54	1.12	2.06	3.9	3.42	5.87	3.83	3.47	6.36	5.23
297	GOG	1.18	2.48	1.74	3.34	3	5.31	1.47	1.35	2.54	2.14
301	SDN	1.02	2.2	2.03	3.93	3.57	6.25	1.99	1.78	3.5	2.84
302	LCY	0.54	1.07	2.04	3.78	3.38	5.81	3.8	3.55	6.29	5.45
306	LCY	1.98	4.41	1.95	3.98	3.93	7.17	0.98	0.9	1.99	1.63
310	FRY	0.6	1.24	0.9	1.71	1.67	2.9	1.5	1.38	2.78	2.33
311	FRY	1.28	2.83	1.18	2.42	2.41	4.36	0.92	0.85	1.88	1.54
312	FRY	1.06	2.34	1.04	2.09	2.09	3.76	0.97	0.89	1.96	1.61
315	NTW	1.01	1.86	2.53	4.43	3.75	6.6	2.51	2.38	3.71	3.55
316	LCY	1.09	1.97	2.75	4.73	4.09	7.31	2.52	2.4	3.75	3.7
317	LCY	0.87	1.66	2.04	3.62	3.21	5.7	2.34	2.18	3.68	3.43
320	FRY	0.94	1.71	2.5	4.25	3.9	7.09	2.66	2.48	4.15	4.14
322	LCY	1	1.79	2.24	4.14	4.21	7.59	2.25	2.32	4.22	4.24
323	LCY	1.06	1.88	2.26	4.05	4.07	7.28	2.13	2.16	3.84	3.88
325	LCY	0.91	1.64	2.03	3.62	3.53	6.27	2.23	2.2	3.89	3.81
326	LCY	0.62	1.19	1.86	3.42	3.14	5.4	3	2.88	5.05	4.56
334	LCY	0.42	0.82	0.59	1.07	1.11	1.84	1.39	1.3	2.61	2.23
335	FRY	0.88	1.57	1.71	3.25	3.38	5.89	1.95	2.08	3.85	3.76
337	MGS	2.32	3.62	2.48	3.67	4.01	5.83	1.07	1.01	1.72	1.61
339	LFN	2.52	3.91	2.58	3.75	4.12	5.88	1.03	0.96	1.64	1.5
341	MGS	1.11	1.85	1.56	2.68	2.87	4.65	1.41	1.45	2.59	2.51
342	LFN	0.75	1.26	1.01	1.7	1.84	2.93	1.34	1.34	2.45	2.32
343	FRY	0.5	0.84	0.62	1.02	1.16	1.79	1.25	1.21	2.34	2.12
344	BSU	0.77	1.28	0.86	1.36	1.58	2.34	1.12	1.06	2.07	1.83
345	SDN	0.62	1.04	0.64	1.02	1.25	1.79	1.05	0.97	2.04	1.72
346	PHS	0.46	0.81	0.56	0.94	1.06	1.64	1.22	1.16	2.32	2.02
347	SDN	0.41	0.74	0.44	0.75	0.88	1.35	1.09	1.02	2.16	1.83
348	SDN	0.42	0.78	0.5	0.88	0.98	1.55	1.2	1.13	2.33	1.99
350	LFN	0.23	0.44	0.2	0.35	0.46	0.72	0.88	0.8	1.97	1.64
351	LFN	0.54	0.92	0.54	0.84	1.05	1.5	1	0.92	1.93	1.63
352	RDW	0.46	0.76	0.4	0.59	0.81	1.09	0.87	0.78	1.78	1.43
354	BVH	3.29	5.02	3	3.99	4.44	5.85	0.91	0.79	1.35	1.16
356	EOR	1.15	1.8	0.99	1.38	1.65	2.23	0.87	0.77	1.43	1.24
357	EOR	1.69	2.62	1.54	2.12	2.46	3.29	0.91	0.81	1.46	1.26
359	RED	0.82	1.33	0.7	1.02	1.36	1.8	0.86	0.76	1.67	1.35
360	EOR	0.95	1.53	0.85	1.21	1.55	2.06	0.89	0.79	1.63	1.35
362	EOR	0.4	0.67	0.35	0.51	0.7	0.92	0.88	0.76	1.77	1.37
363	EOR	0.31	0.55	0.28	0.44	0.59	0.8	0.92	0.8	1.92	1.45
364	EOR	0.23	0.42	0.2	0.32	0.41	0.57	0.85	0.76	1.79	1.36
365	HND	0.35	0.65	0.31	0.53	0.65	0.93	0.89	0.82	1.85	1.43
366	DCY	0.49	0.89	0.43	0.72	0.89	1.26	0.88	0.81	1.8	1.42
367	HND	0.5	0.89	0.44	0.71	0.9	1.26	0.87	0.79	1.8	1.41
370	HND	0.67	1.28	0.61	1.16	1.23	1.91	0.91	0.91	1.82	1.5
371	WWT	0.59	1.05	0.52	0.84	1	1.43	0.87	0.8	1.68	1.36
372	EOR	0.79	1.33	0.66	1	1.29	1.75	0.84	0.75	1.64	1.31
374	EOR	0.8	1.3	0.68	0.99	1.23	1.69	0.85	0.76	1.54	1.3
375	WWT	0.66	1.09	0.57	0.84	1.02	1.42	0.86	0.78	1.54	1.31
376	HND	0.48	0.82	0.43	0.65	0.77	1.1	0.89	0.79	1.6	1.33
378	HND	0.26	0.48	0.24	0.38	0.43	0.63	0.91	0.8	1.66	1.32
392	AGS	0.46	0.95	0.44	0.85	0.93	1.57	0.96	0.89	2.02	1.65

Appendix C-2b (Continued):

Poly #	Soil name	BL		SN_r		SN_φ		SN/BL		SN_φ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	0.43	0.88	0.37	0.7	0.82	1.35	0.85	0.8	1.88	1.54
396	AGS	1.23	2.42	1.03	1.9	2.29	3.7	0.84	0.78	1.87	1.53
401	MGS	0.28	0.55	0.19	0.36	0.44	0.71	0.68	0.64	1.58	1.28
403	CMO	0.32	0.61	0.27	0.49	0.66	1.02	0.85	0.79	2.06	1.67
404	AGS	0.22	0.4	0.19	0.33	0.47	0.71	0.87	0.81	2.18	1.77
405	CMO	0.33	0.65	0.29	0.54	0.68	1.09	0.9	0.83	2.08	1.67
408	AGS	0.29	0.54	0.25	0.42	0.58	0.88	0.85	0.78	2.01	1.63
409	AGS	0.88	1.64	0.78	1.32	1.7	2.56	0.88	0.81	1.93	1.56
410	UCS	0.68	1.32	0.59	1.06	1.37	2.17	0.86	0.8	2.02	1.64
411	COA	2.26	4.46	1.96	3.58	4.54	7.26	0.87	0.8	2.01	1.63
412	CMO	0.41	0.75	0.35	0.6	0.79	1.18	0.87	0.79	1.95	1.57
416	WKN	0.52	1.02	0.41	0.76	0.86	1.42	0.8	0.75	1.67	1.39
418	MMO	1.5	3.02	0.99	1.91	1.93	3.35	0.66	0.63	1.29	1.11
420	TBY	1.71	3.49	1.14	2.22	2.26	3.97	0.67	0.64	1.32	1.14
421	HND	0.73	1.48	0.7	1.27	1.45	2.19	0.96	0.86	1.98	1.48
422	HCH	0.6	1.22	0.57	1.04	1.19	1.8	0.94	0.85	1.96	1.47
423	LET	0.36	0.77	0.34	0.63	0.72	1.1	0.92	0.82	1.99	1.43
425	HND	1.17	2.5	1.17	2.07	2.48	3.68	1	0.83	2.12	1.47
426	MMO	1.77	3.49	1.49	2.77	2.95	4.9	0.84	0.79	1.66	1.4
428	HND	0.62	1.34	0.61	1.11	1.31	1.97	0.99	0.83	2.11	1.47
429	FLU	2.8	5.51	2.44	4.45	5.52	8.83	0.87	0.81	1.97	1.6
430	MCO	1.83	3.55	1.61	2.87	3.56	5.59	0.88	0.81	1.95	1.58
431	AGS	1.93	3.69	1.73	3.06	3.36	5.24	0.9	0.83	1.74	1.42
432	KVG	3.09	6.11	2.83	5.24	4.96	8.15	0.91	0.86	1.61	1.33
433	POK	3.87	7.65	3.48	6.54	5.66	9.58	0.9	0.85	1.46	1.25
435	BTN	2.99	5.99	2.83	5.29	4.64	7.71	0.95	0.88	1.55	1.29
437	POK	2.92	5.77	2.7	4.99	4.59	7.48	0.93	0.86	1.57	1.3
439	COA	1.11	2.16	0.96	1.72	2.22	3.5	0.87	0.8	2	1.62
440	COA	2.16	4.37	1.81	3.48	3.28	5.71	0.84	0.8	1.52	1.31
441	MMO	1.53	3.04	1.23	2.32	2.36	4.04	0.8	0.76	1.55	1.33
442	WTB	1.7	3.32	1.45	2.72	2.52	4.26	0.86	0.82	1.48	1.28
443	HND	0.88	1.83	0.86	1.53	1.81	2.7	0.99	0.84	2.07	1.48
444	MET	0.25	0.51	0.24	0.43	0.5	0.75	0.95	0.85	1.97	1.48
449	KUR	0.31	0.7	0.27	0.51	0.58	0.9	0.86	0.74	1.89	1.29
451	MET	0.2	0.48	0.18	0.37	0.37	0.6	0.87	0.78	1.84	1.24
452	LET	0.19	0.46	0.14	0.3	0.3	0.49	0.75	0.66	1.58	1.05
453	CHN	0.24	0.57	0.24	0.5	0.5	0.8	0.99	0.88	2.08	1.41
457	MAB	0.33	0.81	0.36	0.79	0.73	1.21	1.07	0.98	2.2	1.49
458	MAB	0.48	1.15	0.52	1.19	1.03	1.8	1.08	1.04	2.17	1.57
460	WDN	0.42	1.02	0.46	1.05	0.92	1.58	1.09	1.03	2.17	1.55
461	BVL	0.3	0.74	0.32	0.71	0.65	1.06	1.07	0.96	2.19	1.43
463	HND	0.22	0.49	0.24	0.48	0.51	0.79	1.08	0.99	2.3	1.61
466	HND	0.2	0.48	0.17	0.36	0.36	0.58	0.86	0.75	1.79	1.2
467	WWT	0.23	0.53	0.18	0.36	0.39	0.61	0.79	0.67	1.7	1.15
471	HUK	0.22	0.53	0.21	0.44	0.44	0.7	0.95	0.82	1.99	1.32
472	MAB	0.57	1.51	0.61	1.54	1.18	1.96	1.08	1.02	2.07	1.3
473	HND	0.24	0.6	0.25	0.54	0.52	0.82	1.03	0.89	2.13	1.37
474	MAB	0.38	1	0.41	0.98	0.81	1.33	1.06	0.98	2.11	1.33
475	BVL	0.33	0.9	0.35	0.87	0.69	1.13	1.06	0.97	2.08	1.25
476	MAB	0.55	1.56	0.59	1.56	1.1	1.74	1.07	1	1.99	1.12
478	CCL	0.21	0.52	0.22	0.49	0.44	0.71	1.04	0.93	2.1	1.35
480	HUK	0.17	0.4	0.17	0.35	0.38	0.61	0.99	0.87	2.2	1.51
481	YTW	0.15	0.35	0.15	0.31	0.35	0.56	0.99	0.89	2.3	1.63
484	WWT	0.38	0.81	0.38	0.7	0.81	1.24	1.02	0.86	2.15	1.53
486	YTW	0.22	0.52	0.24	0.45	0.49	0.78	1.05	0.88	2.21	1.5
487	HUK	0.39	1.22	0.41	1.07	0.79	1.24	1.06	0.88	2.02	1.02
489	HUK	0.2	0.52	0.22	0.46	0.45	0.69	1.09	0.88	2.2	1.33

Appendix C-2b (Continued):

Poly #	Soil name	BL		SN_i		SN_w		SN/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	0.33	0.7	0.34	0.61	0.69	1.06	1.02	0.88	2.11	1.53
496	MET	0.18	0.42	0.21	0.39	0.43	0.65	1.12	0.93	2.3	1.56
499	CVD	0.11	0.88	0.1	0.24	0.2	0.32	0.99	0.28	1.95	0.36
508	AGS	1.26	2.43	1.16	2	2.28	3.42	0.91	0.82	1.81	1.41
509	PHS	3.17	6.33	2.95	5.49	5.02	8.13	0.93	0.87	1.58	1.28
510	AGS	0.47	0.89	0.42	0.71	0.92	1.36	0.89	0.8	1.98	1.53
512	BVH	1.33	2.65	1.24	2.19	2.48	3.73	0.93	0.82	1.86	1.41
513	AGS	1.09	2.09	0.99	1.71	1.97	2.97	0.91	0.82	1.81	1.42
514	PHS	2.04	4.13	1.86	3.34	3.88	5.85	0.91	0.81	1.9	1.42
515	BVH	2.17	4.47	1.87	3.47	4.19	6.4	0.86	0.78	1.93	1.43
516	BVH	3.07	6.22	2.82	5.19	5.39	8.41	0.92	0.83	1.76	1.35
517	FLU	2.96	5.92	2.81	4.98	5.39	8.17	0.95	0.84	1.82	1.38
518	MGS	5.39	10.91	4.93	9.37	8.53	13.83	0.92	0.86	1.58	1.27
519	NVR	1.82	3.49	1.68	2.91	3.21	4.8	0.92	0.83	1.76	1.37
520	AGS	3.01	5.98	2.77	5.1	4.92	7.76	0.92	0.85	1.64	1.3
521	POK	5.55	11.25	5.1	9.73	8.59	14.08	0.92	0.87	1.55	1.25
523	PED	5.25	10.49	4.67	9.01	8.02	13.2	0.89	0.86	1.53	1.26
524	FLU	10.67	21.72	9.69	18.79	16.12	26.84	0.91	0.87	1.51	1.24
531	GDB	0.36	0.72	0.32	0.56	0.72	1.07	0.89	0.79	2.01	1.49
532	HKR	0.39	0.81	0.38	0.68	0.81	1.22	0.97	0.84	2.09	1.5
533	HND	0.31	0.66	0.32	0.59	0.69	1.07	1.05	0.9	2.22	1.63
534	MET	0.32	0.67	0.33	0.6	0.74	1.14	1.03	0.9	2.3	1.69
536	HND	0.46	0.96	0.44	0.81	1.02	1.56	0.95	0.85	2.2	1.63
537	BVH	1.14	2.35	1	1.85	2.22	3.39	0.87	0.79	1.94	1.45
538	HND	0.73	1.5	0.66	1.26	1.57	2.41	0.9	0.84	2.14	1.6
539	PHS	1.08	2.21	0.94	1.75	2.05	3.14	0.87	0.79	1.89	1.42
540	KLM	0.47	0.95	0.41	0.74	0.92	1.39	0.87	0.79	1.96	1.47
543	EOR	1.11	2.28	0.97	1.88	2.27	3.51	0.87	0.82	2.05	1.54
545	IRM	1.61	3.31	1.38	2.64	3.11	4.83	0.86	0.8	1.93	1.46
547	DEL	1.51	2.69	1.16	2.24	2.47	3.9	0.77	0.83	1.64	1.45
548	BVH	2	3.89	1.64	3.1	3.49	5.46	0.82	0.8	1.75	1.4
549	FLU	3.11	6.35	2.76	5.25	5.32	8.47	0.89	0.83	1.71	1.33
551	FLU	1.89	3.31	1.44	2.75	2.82	4.51	0.76	0.83	1.49	1.36
553	ATL	1.38	2.17	1	1.86	1.81	2.93	0.72	0.86	1.31	1.35
554	ATL	2.65	3.73	1.86	3.61	2.48	4.08	0.7	0.97	0.94	1.09
555	CYG	1.32	2.42	1.1	2.1	1.97	3.2	0.83	0.87	1.49	1.32
558	DEL	2.41	4.34	2.18	4.39	2.84	4.7	0.9	1.01	1.18	1.08
559	ATL	6.78	11.46	5.7	11.21	7.52	12.61	0.84	0.98	1.11	1.1
561	ATL	5.24	5.53	2.76	5.41	3.69	6.18	0.53	0.98	0.7	1.12
562	BGH	5.25	9.55	4.84	9.68	6.12	10.2	0.92	1.01	1.17	1.07
563	BSK	1.75	2.6	1.27	2.41	1.9	3.11	0.73	0.92	1.09	1.19
564	LET	1.55	4	1.35	3.42	2.3	4.54	0.87	0.86	1.48	1.13
565	DEL	1.81	3.17	1.58	3.16	2.11	3.47	0.87	1	1.16	1.1
566	DEL	2.09	4.18	1.99	4.15	2.75	4.65	0.95	0.99	1.32	1.11
567	BSK	1.31	2.19	1.06	2.09	1.63	2.67	0.81	0.95	1.25	1.22
568	DEL	0.95	1.53	0.68	1.36	1.56	2.46	0.72	0.89	1.64	1.61
569	IRM	1.08	1.59	0.73	1.41	1.46	2.33	0.67	0.89	1.35	1.47
570	HAN	0.61	1.13	0.51	1.03	1.17	1.85	0.84	0.92	1.92	1.65
571	HAN	0.4	0.81	0.43	0.77	0.91	1.4	1.07	0.94	2.29	1.72
572	DVG	16.81	38.97	14.85	34.38	23.44	43.23	0.88	0.88	1.39	1.11
574	LET	0.59	1.1	0.52	1.01	1.01	1.61	0.87	0.91	1.7	1.47
575	WWT	0.69	1.47	0.61	1.45	1.16	1.98	0.88	0.99	1.69	1.34
576	DMH	0.57	1.15	0.57	1.11	1.18	1.86	1	0.96	2.08	1.62
577	BZR	14.85	34.57	13.26	32.06	20.8	39.11	0.89	0.93	1.4	1.13
578	HAN	0.69	1.35	0.73	1.35	1.44	2.24	1.06	1	2.09	1.66
579	LET	0.54	1.16	0.48	1.16	0.98	1.66	0.89	1.01	1.84	1.43
581	HKR	0.34	0.71	0.38	0.68	0.74	1.15	1.11	0.95	2.19	1.61

Appendix C-2b (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	0.6	1.18	0.65	1.15	1.29	1.99	1.09	0.97	2.16	1.68
583	HAN	0.44	0.91	0.48	0.85	0.96	1.48	1.1	0.94	2.19	1.63
584	DMH	0.57	1.13	0.58	1.07	1.25	1.93	1.02	0.94	2.19	1.7
589	HAN	0.65	1.25	0.72	1.25	1.39	2.13	1.1	1	2.13	1.7
590	CHN	0.66	1.61	0.72	1.65	1.44	2.56	1.09	1.02	2.18	1.59
591	BVL	0.66	1.69	0.7	1.75	1.4	2.35	1.06	1.04	2.12	1.39
592	FMT	0.67	1.85	0.68	1.79	1.44	2.34	1.03	0.97	2.16	1.27
593	CVD	0.75	2.03	0.77	1.98	1.57	2.56	1.03	0.98	2.11	1.26
595	ATP	0.63	1.88	0.6	1.4	1.52	2.45	0.96	0.74	2.43	1.3
596	FMT	1.03	2.71	0.98	2.46	2.33	3.77	0.96	0.91	2.27	1.39
598	FMT	1.1	2.87	1.05	2.62	2.46	3.97	0.95	0.91	2.24	1.38
599	MAB	0.88	2.17	0.85	2.41	1.83	2.94	0.97	1.11	2.08	1.35
600	CVD	0.8	2.04	0.76	1.95	1.67	2.68	0.94	0.95	2.08	1.31
601	MAB	0.63	1.81	0.66	1.81	1.29	2.05	1.04	1	2.03	1.13
602	MAB	0.74	1.89	0.74	2.13	1.54	2.47	1	1.13	2.07	1.31
603	MAB	0.34	0.88	0.32	0.87	0.71	1.15	0.96	0.98	2.12	1.3
605	HDY	0.37	0.96	0.38	1.09	0.86	1.4	1.01	1.13	2.31	1.46
606	CVD	0.22	0.9	0.23	0.62	0.51	0.82	1.03	0.69	2.26	0.91
607	CVD	0.23	0.84	0.24	0.54	0.51	0.79	1.02	0.65	2.16	0.94
608	MCT	0.28	0.76	0.28	0.66	0.61	0.97	1	0.87	2.21	1.28
609	TIY	0.26	0.67	0.28	0.78	0.7	1.16	1.07	1.16	2.66	1.72
610	BVL	0.16	0.43	0.16	0.48	0.4	0.68	1	1.12	2.47	1.6
611	HUK	0.24	0.6	0.24	0.64	0.57	0.93	1	1.07	2.39	1.54
613	CCL	0.25	0.6	0.25	0.57	0.57	0.88	0.99	0.95	2.28	1.48
615	CVD	0.08	0.28	0.08	0.23	0.19	0.36	0.9	0.85	2.28	1.29
616	CHN	0.35	0.93	0.32	0.78	0.71	1.15	0.92	0.83	2.05	1.24
617	FMT	0.43	1.19	0.42	1.01	0.95	1.5	0.98	0.85	2.21	1.26
618	CHN	0.85	2.23	0.79	1.85	1.71	2.73	0.93	0.83	2.02	1.22
619	FMT	1.24	3.23	1.16	2.76	2.57	4.12	0.93	0.86	2.07	1.27
620	MAB	2.29	5.93	2.08	4.7	4.37	6.99	0.91	0.79	1.91	1.18
621	TTH	4.39	11.32	3.88	8.61	7.99	12.76	0.88	0.76	1.82	1.13
622	TTH	4.46	11.49	3.95	8.72	8.1	12.93	0.89	0.76	1.82	1.13
623	ZRB	4.81	12.36	4.26	9.42	8.74	13.95	0.89	0.76	1.82	1.13
624	THA	7.28	18.71	6.39	14.05	13.02	20.8	0.88	0.75	1.79	1.11
626	SIL	0.39	1.01	0.5	1.2	1.12	1.81	1.29	1.19	2.88	1.79
627	MAB	0.74	1.91	0.77	1.79	1.68	2.68	1.04	0.93	2.27	1.4
628	BVL	0.83	2.16	0.81	1.87	1.77	2.82	0.98	0.86	2.14	1.31
629	SIL	0.78	2.04	0.79	1.82	1.72	2.75	1.01	0.89	2.19	1.35
631	MAB	0.56	1.53	0.53	1.25	1.22	1.94	0.95	0.82	2.17	1.27
632	MAB	0.22	0.62	0.2	0.49	0.51	0.81	0.91	0.79	2.27	1.32
633	MAB	0.18	0.5	0.15	0.38	0.37	0.63	0.88	0.76	2.12	1.25
634	MAB	0.63	1.66	0.59	1.38	1.32	2.12	0.94	0.83	2.11	1.28
635	MAB	0.44	1.18	0.4	0.95	0.93	1.5	0.92	0.8	2.13	1.27
637	MSN	0.14	0.4	0.12	0.3	0.29	0.51	0.88	0.75	2.17	1.27
638	ZRB	0.34	0.93	0.31	0.75	0.74	1.2	0.92	0.81	2.18	1.29
639	PUR	0.35	1.01	0.31	0.83	0.59	1.2	0.87	0.83	1.66	1.2
641	MAB	0.18	0.53	0.15	0.4	0.37	0.64	0.88	0.75	2.09	1.21
642	MAB	0.16	0.46	0.14	0.35	0.33	0.55	0.88	0.76	2.05	1.21
643	CHN	0.1	0.36	0.08	0.27	0.2	0.42	0.84	0.75	2.11	1.16
645	DLB	1.55	4.06	1.37	3.56	2.37	4.79	0.88	0.88	1.52	1.18
648	CFD	0.07	0.22	0.07	0.21	0.17	0.31	0.93	0.95	2.22	1.36
649	BVL	0.12	0.35	0.1	0.28	0.22	0.4	0.82	0.82	1.9	1.15
650	MAB	0.11	0.34	0.09	0.29	0.24	0.42	0.88	0.87	2.25	1.24
651	RDM	0.44	1.17	0.37	0.98	0.78	1.42	0.84	0.83	1.78	1.21
653	LET	1.2	2.94	1	2.55	1.89	3.54	0.83	0.87	1.58	1.2
654	PUY	0.34	0.78	0.33	0.74	0.74	1.16	0.98	0.95	2.15	1.5
655	DEL	3.62	7.8	3.46	7.59	5.08	8.88	0.95	0.97	1.41	1.14

Appendix C-2b (Continued):

Poly #	Soil name	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	3.26	7.58	2.9	6.84	4.77	8.78	0.89	0.9	1.46	1.16
657	LET	3.29	7.81	2.89	6.87	4.69	8.79	0.88	0.88	1.43	1.13
658	CMY	0.81	2	0.71	1.82	1.23	2.43	0.88	0.91	1.52	1.21
659	DEL	4.67	10.3	4.38	9.69	6.68	11.83	0.94	0.94	1.43	1.15
660	CVD	0.27	0.68	0.26	0.63	0.59	0.94	0.98	0.93	2.23	1.39
661	RDM	0.37	1.2	0.31	0.82	0.64	1.17	0.85	0.69	1.73	0.98
663	LET	1.42	3.44	1.23	2.98	2.09	3.95	0.86	0.87	1.47	1.15
664	RDM	1.1	2.7	0.92	2.28	1.7	3.2	0.84	0.85	1.54	1.19
666	PUR	0.41	1.19	0.36	1	0.68	1.43	0.88	0.84	1.66	1.21
667	LET	1.03	2.71	0.9	2.33	1.56	3.11	0.87	0.86	1.52	1.15
669	LOB	4.53	2.83	1.31	2.61	2.19	3.7	0.29	0.92	0.48	1.31
671	PHS	2.28	2.8	1.28	2.47	2.24	3.71	0.56	0.88	0.98	1.33
672	PED	1.74	2.55	1.15	2.23	2.08	3.41	0.66	0.87	1.19	1.34
673	MMO	1.89	3.13	1.42	2.78	2.49	4.13	0.75	0.89	1.32	1.32
675	BTN	7.04	13.98	6.21	12.1	10.31	17.16	0.88	0.87	1.46	1.23
676	CYG	9.78	19.67	8.74	17	14.55	24.24	0.89	0.86	1.49	1.23
677	BEN	2.82	5.24	2.36	4.6	4.01	6.65	0.84	0.88	1.42	1.27
680	PNC	1.92	2.87	1.25	2.65	2.18	3.77	0.65	0.92	1.13	1.31
681	CYG	2.51	3.6	1.62	3.25	2.84	4.77	0.64	0.9	1.13	1.33
682	BEN	3.77	6.91	3.05	6.1	5.11	8.58	0.81	0.88	1.35	1.24
683	HUB	9.37	19.08	8.39	16.31	12.69	21.18	0.89	0.85	1.35	1.11
684	CAR	2.98	5.65	2.31	4.77	3.9	6.65	0.78	0.84	1.31	1.18
686	LOB	3.46	2.64	1.2	2.47	2.11	3.61	0.35	0.94	0.61	1.37
689	CAR	4.25	8.37	3.18	6.53	5.23	8.96	0.75	0.78	1.23	1.07
690	RMY	5.74	11.22	4.95	9.79	8.21	13.72	0.86	0.87	1.43	1.22
691	HUB	6.99	14.48	5.72	11.44	9	15.22	0.82	0.79	1.29	1.05
692	BTN	7.35	15.19	6.4	12.68	10.34	17.39	0.87	0.83	1.41	1.14
693	RMY	10.46	21.3	9.44	18.35	15.53	25.91	0.9	0.86	1.48	1.22
694	HUB	8.61	17.47	7.66	14.79	11.87	19.81	0.89	0.85	1.38	1.13
695	BTN	6.87	13.83	6.2	11.81	9.24	15.47	0.9	0.85	1.35	1.12
696	BTN	10.74	21.49	9.59	18.31	13.94	23.65	0.89	0.85	1.3	1.1
698	MYW	16.26	32.62	14.26	27.33	20.25	34.35	0.88	0.84	1.25	1.05
699	HUB	13.43	26.63	11.9	22.59	17.57	30.61	0.89	0.85	1.31	1.15
702	CVL	3.96	7.8	3.53	6.67	5.5	9.59	0.89	0.85	1.39	1.23
703	HGV	10.53	20.69	9.39	17.72	14.21	25.29	0.89	0.86	1.35	1.22
705	MCO	20.6	40.11	18.58	34.86	27.89	50.3	0.9	0.87	1.35	1.25
708	MLA	11.53	22.83	10.11	19.18	15.31	27.29	0.88	0.84	1.33	1.2
709	COA	6.25	12.44	5.39	10.39	8.5	15.15	0.86	0.84	1.36	1.22
710	COA	5.22	10.35	4.6	8.76	7.24	12.75	0.88	0.85	1.39	1.23
711	COA	6.11	12.11	5.34	10.22	8.44	15.06	0.87	0.84	1.38	1.24
715	KVG	2.35	4.78	1.81	3.55	3.26	5.78	0.77	0.74	1.39	1.21

Appendix C-2c: Annual water erosion (t/ha) from canola-wheat-fallow averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	3.58	5.49	6.99	1.25	7.24	6.03	1.95	0.23	2.02	1.1
3	DON	2.73	4.02	5	1.16	5.26	3.86	1.83	0.29	1.92	0.96
4	HZM	2.99	4.25	5.33	1.23	5.69	3.22	1.78	0.29	1.9	0.76
5	DON	2.73	3.8	4.78	1.2	5.14	2.67	1.75	0.32	1.88	0.7
6	ESH	2.08	2.91	3.5	1.07	3.76	2.3	1.69	0.37	1.81	0.79
7	COS	3.2	4.84	5.95	1.24	6.2	5.1	1.86	0.26	1.94	1.05
9	BBN	2.15	3.08	3.29	1.19	3.53	2.89	1.53	0.39	1.65	0.94
10	BBN	1.42	1.94	1.73	1.14	1.93	1.96	1.22	0.59	1.36	1.01
11	ESH	1.2	1.61	1.47	1.06	1.65	1.81	1.23	0.66	1.38	1.12
13	HZM	2.13	3.02	2	1.44	2.16	2.48	0.94	0.48	1.01	0.82
14	COS	1.7	2.4	1.93	1.22	2.12	2.32	1.14	0.51	1.25	0.97
15	ABT	1.61	2.25	1.43	1.36	1.58	2.16	0.89	0.6	0.98	0.96
19	HZM	1.53	2.13	1.39	1.35	1.53	2.12	0.91	0.63	1	1
20	LAD	1.44	1.98	1.23	1.34	1.38	1.96	0.85	0.68	0.96	0.99
22	COS	1.57	2.13	1.2	1.6	1.27	2.14	0.76	0.75	0.81	1
27	DON	3.4	4.78	1.44	1.87	1.59	2.42	0.42	0.39	0.47	0.51
28	HZM	2.89	4.33	5.14	1.23	5.38	4.47	1.78	0.28	1.86	1.03
32	HRT	1.38	1.9	1	1.39	1.19	1.77	0.72	0.73	0.86	0.93
33	HRT	1.41	1.94	1.07	1.39	1.25	1.82	0.75	0.72	0.88	0.94
36	COS	2.05	2.76	1.18	1.53	1.31	1.91	0.58	0.55	0.64	0.69
47	DON	1.53	2.04	1.17	1.4	1.28	1.74	0.77	0.68	0.84	0.85
48	DON	1.46	1.98	1.09	1.26	1.27	1.73	0.75	0.64	0.87	0.88
49	TAG	1.46	1.98	1.05	1.29	1.24	1.74	0.72	0.65	0.85	0.88
51	SAD	1.13	1.52	0.97	1.17	1.14	1.68	0.85	0.77	1.01	1.11
52	VVW	1.4	1.92	1.14	1.3	1.32	1.83	0.81	0.67	0.94	0.95
53	TAG	1.51	2.08	1.15	1.4	1.32	1.89	0.76	0.67	0.87	0.91
54	ESH	0.99	1.3	0.88	1.11	1.04	1.59	0.89	0.85	1.05	1.22
56	ZBR	1.35	1.68	1.23	1.2	1.23	1.6	0.92	0.72	0.91	0.95
59	FAL	0.94	1.24	0.83	1.04	1.01	1.42	0.88	0.83	1.08	1.14
60	BBN	0.79	1.05	0.7	0.88	0.88	1.23	0.89	0.84	1.11	1.17
61	RYF	1.01	1.31	1.04	1.06	1.2	1.6	1.03	0.81	1.19	1.22
62	DVS	1.04	1.24	0.98	1.04	1.13	1.52	0.94	0.84	1.09	1.22
64	JUH	0.97	1.2	0.93	1	1.09	1.42	0.96	0.83	1.12	1.19
68	HRT	1.05	1.3	1.03	1.06	1.2	1.55	0.98	0.81	1.14	1.19
70	JUH	0.95	1.2	1	0.99	1.15	1.55	1.05	0.83	1.21	1.29
71	BBN	1.01	1.32	1.14	1.03	1.29	1.63	1.12	0.78	1.28	1.23
72	BLY	1.02	1.33	1.11	1.05	1.27	1.63	1.09	0.79	1.25	1.23
73	RYF	1.44	1.95	2.11	1.04	2.31	1.94	1.47	0.53	1.61	0.99
74	JUH	1.01	1.34	1.3	0.94	1.45	1.67	1.29	0.7	1.43	1.25
75	DIG	1.06	1.39	1.39	0.93	1.53	1.44	1.31	0.67	1.45	1.03
76	JUH	0.91	1.14	0.95	0.96	1.08	1.46	1.04	0.84	1.18	1.28
77	LAD	0.99	1.29	1.24	0.93	1.37	1.5	1.25	0.72	1.39	1.16
78	ABT	0.93	1.18	1.03	0.95	1.16	1.42	1.11	0.81	1.25	1.2
80	BWY	0.86	1.08	0.89	0.93	0.97	1.25	1.03	0.86	1.13	1.15
81	HZM	0.87	1.09	0.94	0.92	1.05	1.25	1.09	0.85	1.21	1.14
83	BUD	0.83	1.05	0.88	0.92	0.96	1.19	1.06	0.87	1.16	1.13
84	HZM	0.83	1.04	0.87	0.92	0.95	1.19	1.05	0.88	1.14	1.14
87	NPA	1.05	1.44	1.39	0.89	1.5	1.47	1.33	0.62	1.43	1.02
88	FAL	1	1.35	1.28	0.89	1.39	1.38	1.28	0.66	1.39	1.02
89	JUH	2.85	4.31	5.36	1.15	5.57	4.68	1.88	0.27	1.96	1.09
91	HZM	0.96	1.32	1.24	0.85	1.31	1.44	1.3	0.65	1.38	1.1
93	DON	1.14	1.59	1.59	0.89	1.71	1.53	1.39	0.56	1.5	0.96
94	HRT	0.99	1.29	1.24	0.93	1.37	1.38	1.26	0.72	1.39	1.07
97	FAL	0.85	1.09	0.8	0.92	0.94	1.26	0.94	0.85	1.11	1.16
98	HZM	0.81	1.09	0.79	1.01	0.92	1.26	0.98	0.93	1.13	1.15

Appendix C-2c (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	0.81	1.04	0.74	0.93	0.84	1.18	0.91	0.9	1.04	1.14
101	FAL	0.88	1.1	0.88	0.94	0.98	1.27	1	0.86	1.11	1.16
102	WHW	0.82	1.03	0.82	0.92	0.89	1.18	0.99	0.89	1.08	1.14
103	ABT	0.81	1.02	0.85	0.94	0.93	1.18	1.05	0.92	1.14	1.16
104	HZM	0.81	1.02	0.84	0.94	0.91	1.18	1.03	0.92	1.12	1.16
105	CTE	0.84	1.05	0.84	0.95	0.92	1.2	1.01	0.9	1.1	1.14
107	ALC	1.03	1.38	1.34	0.94	1.44	1.46	1.29	0.68	1.4	1.06
108	HZM	0.78	0.98	0.81	0.95	0.88	1.17	1.04	0.97	1.13	1.19
109	PRV	0.79	0.99	0.81	0.95	0.88	1.17	1.03	0.95	1.11	1.18
110	CTE	0.83	1.04	0.82	0.96	0.89	1.19	0.99	0.92	1.08	1.14
112	ALC	0.81	1.01	0.84	0.96	0.91	1.18	1.04	0.95	1.12	1.17
130	DVS	0.61	0.78	0.65	0.8	0.71	0.96	1.06	1.03	1.16	1.22
132	CTE	0.78	0.97	0.81	0.96	0.76	1.16	1.05	0.99	0.98	1.2
133	BBN	0.98	1.55	0.92	1.38	1.21	1.65	0.94	0.89	1.24	1.06
135	DVS	0.89	1.36	0.81	1.18	1.09	1.52	0.91	0.86	1.22	1.11
144	BBN	2.76	3.53	2.65	3.32	2.27	3.29	0.96	0.94	0.82	0.93
170	HUB	4.43	6.37	4.41	5.08	3.67	4.64	0.99	0.8	0.83	0.73
171	HUB	5.25	4.16	5.04	5.22	2.25	4.72	0.96	1.26	0.43	1.13
172	KTH	6.73	3.22	6.73	3.78	1.96	6.6	1	1.17	0.29	2.05
173	CUL	7.25	2.9	7.31	3.53	1.7	6.83	1.01	1.22	0.23	2.36
176	HRT	3.96	4.72	3.74	4.73	4.01	7.32	0.94	1	1.01	1.55
177	HRT	4.96	3.79	4.26	5.21	2.35	5.76	0.86	1.37	0.47	1.52
178	HPE	3.84	4.39	2.03	2.53	2.09	3.69	0.53	0.58	0.54	0.84
180	KNZ	3.46	3.58	2.27	2.95	1.91	3.65	0.66	0.82	0.55	1.02
181	COS	2.43	2.46	1.82	2.49	1.55	2.95	0.75	1.01	0.64	1.2
182	ATO	4.43	5.12	1.88	2.38	1.87	3.33	0.42	0.46	0.42	0.65
185	UCS	4.61	5.26	2.44	2.92	2.45	4.44	0.53	0.56	0.53	0.84
189	CUL	3.9	4.63	3.55	4.58	3.79	6.96	0.91	0.99	0.97	1.5
192	COA	5.56	4.29	5.38	4.44	3.12	7.05	0.97	1.04	0.56	1.64
193	MLA	6.42	4.26	6.22	4.28	2.86	7.37	0.97	1	0.45	1.73
194	MLA	4.42	4.87	3.34	3.93	3.27	6.09	0.76	0.81	0.74	1.25
196	LNN	5.1	6.29	1.42	1.78	1.77	2.83	0.28	0.28	0.35	0.45
197	COA	4.31	4.92	3.14	3.86	3.59	6.06	0.73	0.78	0.83	1.23
198	COA	4.46	4.7	4.03	4.64	3.87	7.13	0.91	0.99	0.87	1.52
201	HRT	8.06	2.61	8.1	3.27	1.28	6.79	1.01	1.25	0.16	2.6
211	ZOR	1.39	1.7	1.13	1.63	1.33	2.12	0.81	0.96	0.96	1.25
212	ABC	1.27	1.55	1.07	1.47	1.32	1.95	0.84	0.95	1.04	1.25
215	ABC	1.46	1.76	1.12	1.56	1.35	2.14	0.77	0.89	0.92	1.22
218	KNZ	1.73	2.04	1.19	1.58	1.53	2.41	0.69	0.78	0.88	1.18
221	EGL	1.11	1.3	1.04	1.35	1.35	1.78	0.93	1.04	1.21	1.37
224	ABC	1.14	1.32	1.03	1.35	1.35	1.81	0.91	1.02	1.18	1.37
227	TNW	1.37	1.62	1.16	1.51	1.61	2.38	0.85	0.93	1.17	1.47
231	ABC	1.38	1.7	1.16	1.49	1.76	2.49	0.84	0.88	1.27	1.47
232	MLA	1.02	1.17	0.89	1.12	1.26	1.83	0.88	0.95	1.23	1.56
233	KNZ	1.08	1.24	0.94	1.2	1.27	1.83	0.88	0.97	1.18	1.48
236	ABC	1.05	1.26	1.01	1.25	1.44	1.9	0.96	1	1.38	1.51
240	KNZ	1.19	1.44	1.02	1.28	1.53	2.08	0.85	0.89	1.29	1.45
246	GDI	1.44	1.72	1.6	1.94	2.43	2.7	1.11	1.13	1.69	1.57
248	GDI	2.1	2.44	2.47	2.92	3.83	3.63	1.18	1.2	1.83	1.49
250	ABC	1.92	2.29	2.17	2.65	3.4	3.25	1.13	1.15	1.77	1.42
252	UCS	3.36	4.03	1.44	1.95	1.73	2.83	0.43	0.48	0.51	0.7
253	COD	3.68	4.46	1.47	1.93	1.87	2.99	0.4	0.43	0.51	0.67
254	PIB	4.44	5.49	1.48	1.92	2.02	3.03	0.33	0.35	0.45	0.55
258	POK	2.42	2.95	1.81	2.36	2.6	3.59	0.75	0.8	1.07	1.22
259	RDW	2.84	3.48	1.87	2.46	2.68	3.8	0.66	0.71	0.94	1.09
261	NIT	2.35	2.9	1.92	2.53	2.82	3.94	0.82	0.87	1.2	1.36
264	COA	2.16	2.69	1.98	2.63	2.97	4.18	0.92	0.98	1.37	1.55

Appendix C-2c (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	1.76	2.19	1.52	1.98	2.29	3.26	0.86	0.9	1.3	1.49
271	FLU	1.89	2.42	1.75	2.36	2.74	3.23	0.92	0.97	1.45	1.34
275	RDW	1.85	2.5	1.99	2.76	3.16	2.82	1.08	1.1	1.71	1.13
279	ABC	1.97	2.49	2.11	2.73	3.37	3.12	1.07	1.1	1.72	1.25
290	ABC	2.03	2.35	2.35	2.76	3.62	3.63	1.16	1.17	1.79	1.55
291	LCY	1.59	1.93	2.16	2.64	3.15	2.96	1.36	1.37	1.99	1.54
292	TMN	1.68	2.07	2.94	3.74	4	4.12	1.75	1.81	2.38	1.99
296	NIT	1.17	1.52	4.28	5.39	5.81	1.94	3.66	3.55	4.97	1.28
297	GOG	1.55	1.93	2.75	3.44	3.92	2.7	1.78	1.78	2.54	1.39
301	SDN	1.6	2.08	3.81	4.85	5.37	2.35	2.38	2.33	3.35	1.13
302	LCY	1.6	2.13	4.62	5.9	6.32	1.92	2.89	2.77	3.95	0.9
306	LCY	2.09	2.6	2.6	3.29	4.04	3.15	1.25	1.26	1.93	1.21
310	FRY	2.96	4.45	3.71	5.45	5.55	2.56	1.26	1.23	1.88	0.58
311	FRY	2.2	3.09	2.34	3.34	3.74	3.07	1.07	1.08	1.7	0.99
312	FRY	2.64	3.96	2.84	4.29	4.52	3.19	1.08	1.08	1.71	0.81
315	NTW	2.3	2.81	4.53	5.81	6.08	5.83	1.97	2.07	2.64	2.08
316	LCY	2.54	3.09	4.96	6.29	6.67	5.42	1.96	2.04	2.63	1.75
317	LCY	1.9	2.36	3.88	4.88	5.3	3.32	2.04	2.07	2.8	1.41
320	FRY	2.22	2.76	4.82	5.98	6.57	2.27	2.17	2.16	2.95	0.82
322	LCY	2.6	3.14	4.86	5.78	7.06	2.62	1.87	1.84	2.72	0.83
323	LCY	2.65	3.24	4.81	5.78	6.9	2.84	1.81	1.78	2.6	0.88
325	LCY	2.54	3.24	4.61	5.74	6.55	2.53	1.82	1.78	2.58	0.78
326	LCY	2.05	2.76	4.56	5.88	6.34	2.13	2.22	2.13	3.09	0.77
334	LCY	3.35	4.98	3.89	5.71	5.72	2.1	1.16	1.15	1.71	0.42
335	FRY	2.77	3.54	4.51	5.56	6.62	2.93	1.63	1.57	2.39	0.83
337	MGS	3.64	4.38	4.43	5.12	6.2	5.99	1.22	1.17	1.7	1.37
339	LFN	3.76	4.51	4.44	5.11	6.22	6.25	1.18	1.13	1.65	1.38
341	MGS	3.1	4.03	4.22	5.31	6.15	3.82	1.36	1.32	1.99	0.95
342	LFN	3.36	4.65	4.13	5.56	5.98	2.95	1.23	1.2	1.78	0.63
343	FRY	3.49	4.99	4.01	5.65	5.82	2.52	1.15	1.13	1.67	0.51
344	BSU	2.83	3.85	3.26	4.34	4.94	4.79	1.15	1.13	1.74	1.25
345	SDN	2.62	3.6	2.91	3.95	4.53	5.08	1.11	1.09	1.73	1.41
346	PHS	3.16	4.59	3.58	5.13	5.31	2.84	1.13	1.12	1.68	0.62
347	SDN	2.64	4.03	2.82	4.27	4.45	3.51	1.07	1.06	1.68	0.87
348	SDN	3.04	4.62	3.34	5.05	5.12	3.05	1.1	1.09	1.69	0.66
350	LFN	1.76	2.74	1.72	2.68	2.87	2.6	0.98	0.98	1.63	0.95
351	LFN	2.17	3.03	2.32	3.19	3.68	4.36	1.07	1.05	1.7	1.44
352	RDW	1.85	2.52	1.87	2.51	3.01	4.52	1.02	0.99	1.63	1.79
354	BVH	4.27	5.05	4.48	5.02	6.07	7.55	1.05	1	1.42	1.5
356	EOR	3.12	4.02	3.36	3.98	4.03	6.46	1.08	0.99	1.29	1.61
357	EOR	3.36	4.24	3.55	4.25	4.77	6.73	1.06	1	1.42	1.59
359	RED	3.05	4.12	2.99	3.8	4.29	7.54	0.98	0.92	1.41	1.83
360	EOR	2.97	3.95	2.98	3.77	4.38	7.19	1	0.96	1.48	1.82
362	EOR	1.84	2.52	1.81	2.48	2.5	4.37	0.99	0.99	1.36	1.74
363	EOR	1.77	2.41	1.78	2.47	2.2	4.23	1.01	1.02	1.24	1.76
364	EOR	2.3	3.11	2.36	3.22	3.08	6.16	1.03	1.04	1.34	1.98
365	HND	2.52	3.44	2.6	3.6	2.69	5.62	1.03	1.05	1.07	1.64
366	DCY	2.8	3.85	2.88	3.96	2.64	5.73	1.03	1.03	0.94	1.49
367	HND	2.73	3.74	2.77	3.76	2.75	5.82	1.01	1.01	1.01	1.56
370	HND	4.41	6.19	4.74	6.94	1.35	5.38	1.07	1.12	0.31	0.87
371	WWT	2.73	3.72	2.84	3.83	2.3	5.01	1.04	1.03	0.84	1.35
372	EOR	3.21	4.34	3.17	4.09	3.61	7.22	0.99	0.94	1.13	1.66
374	EOR	2.87	3.79	3.03	3.71	3.49	6.23	1.05	0.98	1.22	1.64
375	WWT	2.33	3.04	2.51	3.04	2.82	4.88	1.08	1	1.21	1.6
376	HND	1.73	2.25	1.84	2.27	2.08	3.58	1.06	1.01	1.2	1.59
378	HND	1.17	1.54	1.23	1.59	1.29	2.34	1.05	1.04	1.1	1.52
392	AGS	2.11	3.24	2.16	3.39	3.51	2.64	1.02	1.05	1.67	0.81

Appendix C-2c (Continued):

Poly #	Soil name	BL		SN_t		SN_{ψ}		SN_t/BL		SN_{ψ}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	1.21	1.6	1.19	1.69	1.96	2.05	0.99	1.05	1.62	1.28
396	AGS	2.02	2.45	1.96	2.54	3.27	2	0.97	1.04	1.62	0.81
401	MGS	1.5	1.84	1.44	1.89	2.12	2.72	0.96	1.03	1.41	1.48
403	CMO	1.01	1.34	1	1.43	1.71	1.8	0.99	1.07	1.69	1.35
404	AGS	0.89	1.22	0.9	1.34	1.54	1.68	1.01	1.09	1.72	1.37
405	CMO	1.59	2.38	1.61	2.49	2.66	2.21	1.01	1.05	1.67	0.93
408	AGS	1.15	1.63	1.12	1.66	1.92	2.03	0.97	1.02	1.66	1.24
409	AGS	1.44	1.78	1.43	1.83	2.39	1.96	0.99	1.03	1.66	1.1
410	UCS	1.5	1.9	1.49	2.04	2.56	1.94	1	1.07	1.71	1.02
411	COA	2.98	3.57	2.97	3.8	5.43	1.13	1	1.07	1.82	0.32
412	CMO	1.03	1.35	1.01	1.35	1.73	2.11	0.98	1.01	1.68	1.56
416	WKN	1.63	1.96	1.6	2.07	2.33	2.77	0.99	1.06	1.43	1.41
418	MMO	3.12	3.8	2.54	3.27	3.53	5.18	0.81	0.86	1.13	1.36
420	TBY	3.77	4.54	3.17	4.04	4.36	6.98	0.84	0.89	1.16	1.54
421	HND	3.45	4.72	3.66	5.01	2.74	5.63	1.06	1.06	0.79	1.19
422	HCH	2.73	3.71	2.89	3.91	2.16	4.39	1.06	1.05	0.79	1.18
423	LET	1.36	1.76	1.41	1.74	1.72	2.73	1.04	0.98	1.27	1.55
425	HND	3.03	3.93	3.21	3.82	4.52	6.06	1.06	0.97	1.49	1.54
426	MMO	2.42	2.92	2.32	2.99	3.49	2.91	0.96	1.03	1.44	1
428	HND	1.95	2.55	1.97	2.38	2.72	3.77	1.01	0.93	1.4	1.48
429	FLU	3.34	3.9	3.34	4.16	6	1	1	1.07	1.8	0.26
430	MCO	2.38	2.79	2.39	2.94	4.09	1.77	1.01	1.05	1.72	0.63
431	AGS	2.11	2.44	2.11	2.51	3.21	2.45	1	1.03	1.52	1
432	KVG	2.47	2.8	2.53	2.95	3.45	2.85	1.02	1.05	1.39	1.02
433	POK	2.49	2.84	2.52	3.03	2.85	3.16	1.01	1.07	1.15	1.12
435	BTN	2.21	2.66	2.37	2.76	2.72	3.81	1.07	1.04	1.23	1.43
437	POK	2.3	2.54	2.36	2.63	2.91	3.28	1.03	1.03	1.27	1.29
439	COA	1.84	2.27	1.83	2.41	3.23	1.72	0.99	1.06	1.75	0.76
440	COA	3.44	4.16	3.37	4.31	4.58	7.22	0.98	1.04	1.33	1.74
441	MMO	2.65	3.2	2.5	3.21	3.51	4.56	0.94	1	1.32	1.42
442	WTB	1.97	2.38	1.93	2.54	2.55	3.17	0.98	1.07	1.29	1.33
443	HND	3.08	4.11	3.25	4.15	3.77	5.98	1.06	1.01	1.22	1.45
444	MET	2.18	3.03	2.24	2.93	2.91	5.2	1.03	0.97	1.34	1.71
449	KUR	1.35	1.82	1.08	1.31	1.45	2.13	0.8	0.72	1.07	1.18
451	MET	1.26	1.75	0.97	1.21	1.37	2.04	0.77	0.69	1.09	1.16
452	LET	1.16	1.61	0.73	0.91	0.99	1.5	0.63	0.56	0.85	0.93
453	CHN	1.35	1.87	1.2	1.5	1.75	2.53	0.89	0.8	1.3	1.36
457	MAB	1.48	2.03	1.49	1.88	2.17	3.06	1	0.93	1.46	1.51
458	MAB	1.55	2.05	1.62	2.05	2.39	3.18	1.05	1	1.55	1.55
460	WDN	1.53	2.05	1.59	2	2.32	3.15	1.04	0.98	1.52	1.53
461	BVL	1.4	1.93	1.4	1.77	2.03	2.89	1	0.92	1.45	1.5
463	HND	1.5	2.12	1.49	1.88	2.12	3.18	0.99	0.89	1.41	1.5
466	HND	1.2	1.67	0.88	1.1	1.27	1.87	0.74	0.66	1.06	1.11
467	WWT	1.21	1.66	0.83	1.01	1.12	1.67	0.68	0.61	0.93	1.01
471	HUK	1.12	1.52	0.97	1.19	1.4	1.99	0.86	0.78	1.25	1.31
472	MAB	1.57	2.06	1.62	2.06	2.4	3.06	1.03	1	1.52	1.48
473	HND	1.18	1.61	1.14	1.43	1.66	2.35	0.96	0.89	1.4	1.46
474	MAB	1.33	1.78	1.35	1.71	1.98	2.66	1.01	0.96	1.49	1.49
475	BVL	1.13	1.49	1.13	1.45	1.67	2.19	1.01	0.97	1.48	1.47
476	MAB	1.46	1.9	1.46	1.86	2.14	2.69	1	0.98	1.47	1.42
478	CCL	0.9	1.2	0.89	1.13	1.31	1.78	0.99	0.94	1.45	1.49
480	HUK	0.92	1.2	0.9	1.09	1.25	1.79	0.97	0.91	1.36	1.49
481	YTW	0.86	1.11	0.86	1.04	1.17	1.7	1	0.93	1.36	1.53
484	WWT	1.7	2.26	1.74	2.16	2.42	3.59	1.02	0.95	1.42	1.59
486	YTW	1.14	1.49	1.14	1.4	1.7	2.41	1	0.94	1.49	1.62
487	HUK	1.14	1.5	1.15	1.49	1.7	2.21	1.01	0.99	1.49	1.47
489	HUK	0.93	1.23	0.92	1.17	1.41	1.97	0.99	0.95	1.53	1.6

Appendix C-2c (Continued):

Poly #	Soil name	BL		SN_t		SN_{φ}		SN_t/BL		SN_{φ}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	2.03	2.79	2.08	2.61	2.91	4.55	1.03	0.93	1.44	1.63
496	MET	0.94	1.26	0.92	1.16	1.46	2.07	0.98	0.92	1.55	1.64
499	CVD	0.57	0.83	0.59	0.83	0.84	1.35	1.04	1	1.46	1.63
508	AGS	1.76	1.98	1.78	1.93	2.57	3.27	1.01	0.97	1.46	1.65
509	PHS	2.51	2.58	2.58	2.65	2.89	3.55	1.03	1.03	1.15	1.38
510	AGS	1.09	1.41	1.09	1.37	1.84	2.6	1	0.97	1.69	1.85
512	BVH	1.97	2.24	2	2.1	2.94	4.07	1.02	0.94	1.49	1.82
513	AGS	1.6	1.82	1.6	1.78	2.36	2.97	1	0.98	1.48	1.63
514	PHS	2.63	2.9	2.7	2.77	4.06	5.49	1.03	0.95	1.54	1.89
515	BVH	2.78	3.07	2.82	2.9	4.45	6.33	1.01	0.94	1.6	2.06
516	BVH	3.23	2.98	3.3	2.96	4.07	5.33	1.02	0.99	1.26	1.79
517	FLU	3.29	3.35	3.43	3.32	4.62	5.49	1.04	0.99	1.4	1.64
518	MGS	4.22	2.73	4.21	2.95	3.67	4.49	1	1.08	0.87	1.54
519	NVR	2.11	2.29	2.15	2.26	2.99	3.51	1.02	0.99	1.41	1.53
520	AGS	2.68	2.49	2.71	2.54	3.18	3.73	1.01	1.02	1.19	1.49
521	POK	4	2.66	4	2.9	3.3	4.07	1	1.09	0.83	1.53
523	PED	4	2.22	3.93	2.45	2.94	3.93	0.98	1.1	0.73	1.77
524	FLU	7	2.43	6.84	3.12	3.67	4.32	0.98	1.28	0.52	1.77
531	GDB	1.52	2.07	1.47	1.81	2.35	4.28	0.97	0.88	1.54	2.07
532	HKR	2.05	2.8	2.06	2.58	2.95	4.96	1.01	0.92	1.44	1.77
533	HND	1.69	2.26	1.68	2.06	2.64	4.09	0.99	0.91	1.56	1.81
534	MET	1.59	2.15	1.58	1.91	2.47	3.74	1	0.89	1.56	1.74
536	HND	1.69	2.26	1.67	1.98	2.66	4.17	0.99	0.88	1.57	1.85
537	BVH	2.24	2.72	2.2	2.45	3.48	5.7	0.98	0.9	1.55	2.09
538	HND	1.76	2.2	1.79	2.04	2.87	4.19	1.01	0.92	1.63	1.9
539	PHS	2.23	2.69	2.16	2.41	3.35	5.7	0.97	0.89	1.51	2.12
540	KLM	1.93	2.57	1.81	2.21	2.92	5.61	0.94	0.86	1.52	2.18
543	EOR	1.93	2.21	1.98	2.12	3.12	4.35	1.02	0.96	1.62	1.97
545	IRM	2.23	2.4	2.26	2.31	3.49	4.91	1.02	0.96	1.57	2.04
547	DEL	1.85	1.93	1.89	1.89	2.74	3.77	1.02	0.98	1.48	1.96
548	BVH	2.33	2.39	2.34	2.28	3.44	4.92	1	0.95	1.48	2.06
549	FLU	3.14	2.69	3.14	2.68	3.65	5.15	1	1	1.17	1.92
551	FLU	1.96	1.9	1.96	1.84	2.45	3.58	1	0.97	1.25	1.89
553	ATL	1.28	1.41	1.31	1.37	1.78	2.64	1.03	0.97	1.39	1.87
554	ATL	1.14	1.3	1.17	1.23	1.77	2.08	1.03	0.95	1.55	1.6
555	CYG	1.44	1.32	1.41	1.25	1.57	2.28	0.98	0.94	1.09	1.73
558	DEL	1.14	1.28	1.18	1.22	1.7	1.82	1.04	0.96	1.5	1.43
559	ATL	1.95	2.05	1.97	1.94	2.81	3	1.01	0.95	1.44	1.46
561	ATL	1.38	1.56	1.44	1.54	2.11	2.57	1.04	0.98	1.52	1.65
562	BGH	1.66	1.73	1.69	1.59	2.37	2.14	1.02	0.92	1.43	1.23
563	BSK	1.07	1.26	1.11	1.21	1.62	2.26	1.04	0.96	1.51	1.8
564	LET	1.41	2.32	1.68	2.21	2.01	2.71	1.19	0.95	1.42	1.17
565	DEL	1.05	1.22	1.08	1.16	1.59	1.81	1.03	0.95	1.52	1.48
566	DEL	1.23	1.63	1.18	1.39	1.79	1.82	0.96	0.85	1.46	1.12
567	BSK	1.09	1.32	1.1	1.23	1.71	2.09	1.01	0.94	1.57	1.59
568	DEL	1.45	1.64	1.52	1.64	2.33	3.06	1.05	1	1.61	1.86
569	IRM	1.24	1.46	1.29	1.43	1.98	2.68	1.04	0.98	1.6	1.84
570	HAN	1.21	1.42	1.26	1.42	1.97	2.6	1.04	1	1.63	1.83
571	HAN	1.54	2.04	1.56	1.84	2.38	3.33	1.02	0.9	1.55	1.63
572	DVG	4.06	7.25	4.11	5.36	2.2	6.02	1.01	0.74	0.54	0.83
574	LET	0.92	1.11	0.96	1.1	1.5	1.99	1.04	1	1.62	1.8
575	WWT	1.09	1.35	1.02	1.22	1.64	1.89	0.93	0.9	1.51	1.4
576	DMH	1.25	1.5	1.3	1.49	1.97	2.58	1.04	0.99	1.57	1.72
577	BZR	3.75	6.9	4.6	2.76	1.92	6.49	1.23	0.4	0.51	0.94
578	HAN	1.52	1.81	1.59	1.84	2.31	3.02	1.05	1.01	1.52	1.67
579	LET	1.02	1.24	0.96	1.15	1.54	1.83	0.95	0.92	1.51	1.47
581	HKR	1.48	1.91	1.49	1.83	2.27	3.24	1.01	0.96	1.53	1.7

Appendix C-2c (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	1.7	2.12	1.76	2.05	2.6	3.57	1.03	0.97	1.53	1.68
583	HAN	1.47	1.88	1.5	1.79	2.26	3.16	1.02	0.95	1.54	1.68
584	DMH	1.62	2.06	1.66	1.92	2.53	3.49	1.03	0.93	1.57	1.7
589	HAN	1.68	2.06	1.75	2.03	2.54	3.45	1.04	0.99	1.51	1.68
590	CHN	1.74	2.25	1.9	2.41	2.85	3.57	1.1	1.07	1.64	1.59
591	BVL	1.67	2.18	1.77	2.25	2.66	3.34	1.05	1.03	1.59	1.53
592	FMT	1.62	2.1	1.67	2.15	2.6	3.24	1.03	1.02	1.61	1.54
593	CVD	1.74	2.25	1.78	2.27	2.75	3.34	1.02	1.01	1.58	1.49
595	ATP	1.69	2.15	1.6	2.1	2.82	3.33	0.95	0.98	1.67	1.55
596	FMT	1.93	2.4	1.88	2.4	3.22	3.58	0.97	1	1.67	1.49
598	FMT	1.97	2.44	1.91	2.44	3.26	3.55	0.97	1	1.66	1.45
599	MAB	1.59	2.06	1.69	2.16	2.66	3.25	1.07	1.05	1.67	1.58
600	CVD	1.63	2.16	1.64	2.18	2.56	2.99	1	1.01	1.57	1.38
601	MAB	1.5	1.98	1.55	2.01	2.32	2.91	1.03	1.01	1.54	1.47
602	MAB	1.5	1.97	1.6	2.06	2.46	3.09	1.07	1.04	1.64	1.57
603	MAB	1.13	1.6	1.16	1.65	1.76	2.4	1.02	1.03	1.56	1.5
605	HDY	1.33	1.87	1.39	1.97	2.11	2.8	1.05	1.05	1.59	1.5
606	CVD	0.97	1.39	1.02	1.44	1.48	2.07	1.05	1.04	1.53	1.49
607	CVD	0.82	1.1	0.85	1.12	1.24	1.76	1.04	1.02	1.53	1.6
608	MCT	0.87	1.14	0.91	1.18	1.35	1.83	1.04	1.03	1.56	1.6
609	TIY	1.45	2.11	1.52	2.23	2.25	2.97	1.05	1.06	1.55	1.4
610	BVL	0.97	1.4	1.03	1.53	1.54	2.2	1.06	1.09	1.59	1.58
611	HUK	1.04	1.46	1.09	1.54	1.64	2.18	1.04	1.05	1.57	1.49
613	CCL	0.73	0.92	0.76	0.96	1.17	1.54	1.05	1.04	1.61	1.68
615	CVD	0.82	1.21	0.87	1.37	1.35	2.25	1.06	1.14	1.66	1.87
616	CHN	1.15	1.64	1.18	1.76	1.85	2.74	1.02	1.08	1.6	1.67
617	FMT	1.27	1.79	1.27	1.82	2.02	2.85	1	1.01	1.59	1.59
618	CHN	1.6	2.15	1.57	2.13	2.45	2.77	0.98	0.99	1.53	1.29
619	FMT	1.9	2.41	1.86	2.4	3.04	3.19	0.98	0.99	1.6	1.32
620	MAB	2.34	2.81	2.31	2.79	3.63	2.42	0.99	0.99	1.55	0.86
621	TTH	3.81	4.39	3.54	4.13	5.37	2.05	0.93	0.94	1.41	0.47
622	TTH	3.76	4.31	3.53	4.08	5.33	1.84	0.94	0.95	1.42	0.43
623	ZRB	3.89	4.39	3.69	4.21	5.56	1.59	0.95	0.96	1.43	0.36
624	THA	5.61	6.23	5.15	5.78	7.64	1.18	0.92	0.93	1.36	0.19
626	SIL	0.53	0.72	0.98	1.19	1.69	1.91	1.83	1.65	3.17	2.63
627	MAB	0.92	1.2	1.22	1.51	2.03	2.04	1.33	1.26	2.2	1.7
628	BVL	1.1	1.45	1.29	1.62	2.11	2.16	1.17	1.12	1.91	1.48
629	SIL	1.03	1.35	1.26	1.57	2.08	2.14	1.23	1.16	2.02	1.58
631	MAB	1.16	1.64	1.19	1.59	1.95	2.6	1.03	0.97	1.68	1.59
632	MAB	0.95	1.46	0.99	1.4	1.6	2.45	1.04	0.96	1.68	1.68
633	MAB	0.93	1.43	0.98	1.45	1.57	2.3	1.05	1.01	1.69	1.61
634	MAB	1.11	1.55	1.18	1.54	1.91	2.35	1.06	0.99	1.71	1.51
635	MAB	1.06	1.54	1.1	1.5	1.78	2.39	1.04	0.98	1.68	1.55
637	MSN	0.95	1.49	1.02	1.53	1.63	2.34	1.07	1.03	1.71	1.57
638	ZRB	1	1.48	1.05	1.46	1.69	2.41	1.05	0.98	1.69	1.62
639	PUR	0.94	1.53	1.06	1.49	1.54	1.95	1.12	0.98	1.63	1.28
641	MAB	0.96	1.44	1.01	1.54	1.6	2.44	1.05	1.07	1.67	1.7
642	MAB	1.03	1.52	1.08	1.73	1.71	2.9	1.05	1.14	1.66	1.91
643	CHN	0.82	1.22	0.88	1.39	1.37	2.21	1.08	1.14	1.67	1.81
645	DLB	1.93	3.3	2.33	3.1	2.95	2.92	1.21	0.94	1.53	0.89
648	CFD	0.64	0.93	0.69	1.05	1.06	1.66	1.07	1.14	1.66	1.79
649	BVL	0.86	1.32	1.02	1.58	1.39	2.4	1.19	1.2	1.63	1.82
650	MAB	0.79	1.15	0.88	1.32	1.27	2.01	1.12	1.15	1.62	1.75
651	RDM	0.87	1.19	0.85	1.16	1.36	1.68	0.97	0.98	1.56	1.42
653	LET	1.32	1.81	1.27	1.66	1.95	2.36	0.96	0.92	1.47	1.31
654	PUY	0.85	1.07	0.88	1.08	1.36	1.75	1.04	1.01	1.6	1.64
655	DEL	1.72	2.81	1.53	2.25	2.5	2.04	0.89	0.8	1.45	0.73

Appendix C-2c (Continued):

Poly #	Soil name	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	1.65	2.78	1.58	2.29	2.2	2.62	0.95	0.83	1.33	0.94
657	LET	1.46	2.45	1.56	2.13	1.64	2.72	1.07	0.87	1.13	1.11
658	CMY	0.83	1.21	0.9	1.24	1.26	1.85	1.09	1.03	1.52	1.53
659	DEL	2.12	4.9	1.63	3.22	3.69	1.85	0.77	0.66	1.74	0.38
660	CVD	0.82	1.07	0.85	1.11	1.3	1.72	1.04	1.04	1.58	1.61
661	RDM	0.83	1.2	0.86	1.27	1.31	1.83	1.04	1.05	1.58	1.52
663	LET	1.07	1.71	1.17	1.62	1.47	2.23	1.09	0.94	1.37	1.3
664	RDM	1.11	1.67	1.09	1.64	1.62	2.16	0.98	0.99	1.47	1.3
666	PUR	1.03	1.7	1.18	1.66	1.67	2.04	1.14	0.97	1.63	1.2
667	LET	1.25	2.06	1.46	1.98	1.89	2.27	1.17	0.96	1.51	1.1
669	LOB	1.51	1.64	1.58	1.75	1.86	2.93	1.04	1.06	1.23	1.78
671	PHS	1.53	1.59	1.57	1.63	1.81	2.81	1.02	1.02	1.18	1.76
672	PED	1.52	1.54	1.52	1.52	1.75	2.66	1	0.99	1.15	1.73
673	MMO	1.73	1.68	1.74	1.71	1.77	2.77	1.01	1.02	1.02	1.65
675	BTN	4.91	2.84	4.83	3.21	2.83	4.25	0.98	1.13	0.58	1.49
676	CYG	6.49	2.46	6.33	3.06	3.33	4.22	0.97	1.24	0.51	1.71
677	BEN	2.31	1.9	2.3	1.98	2	3.05	1	1.04	0.87	1.61
680	PNC	1.77	2.19	1.83	2.35	2.14	3.65	1.04	1.07	1.21	1.67
681	CYG	2	2.03	2.04	2.15	2.01	3.33	1.02	1.06	1.01	1.64
682	BEN	3.06	3.06	3.08	3.27	2.26	4.24	1.01	1.07	0.74	1.38
683	HUB	4.71	5.13	4.62	5.06	3.16	5.87	0.98	0.99	0.67	1.15
684	CAR	2.85	3.48	2.87	3.63	2.06	4.44	1.01	1.04	0.72	1.28
686	LOB	1.65	1.86	1.71	1.99	1.95	3.22	1.04	1.07	1.18	1.74
689	CAR	3.45	4.33	3.6	4.64	2.29	5.19	1.04	1.07	0.66	1.2
690	RMY	4.34	3.66	4.36	4	2.53	4.78	1	1.09	0.58	1.31
691	HUB	5.07	6.37	4.98	6.37	2.13	6.38	0.98	1	0.42	1
692	BTN	5.57	5.73	5.53	5.99	2.36	6.04	0.99	1.05	0.42	1.05
693	RMY	6.79	2.99	6.62	3.58	3.39	4.6	0.98	1.2	0.5	1.54
694	HUB	4.45	3.94	4.35	3.94	3.15	4.97	0.98	1	0.71	1.26
695	BTN	2.91	3.69	2.93	3.51	3.18	4.87	1.01	0.95	1.09	1.32
696	BTN	3.69	4.67	3.57	4.37	3.39	5.61	0.97	0.93	0.92	1.2
698	MYW	4.61	6.06	4.25	5.23	3.9	7.01	0.92	0.86	0.84	1.16
699	HUB	4.76	5.53	4.6	5.33	2.73	6.13	0.97	0.96	0.57	1.11
702	CVL	2.64	3	2.58	3.13	2.43	3.98	0.98	1.04	0.92	1.33
703	HGV	4.61	5.07	4.5	5.14	2.31	5.81	0.98	1.01	0.5	1.15
705	MCO	6.72	7.5	6.54	7.69	0.71	6.7	0.97	1.02	0.11	0.89
708	MLA	5.99	5.45	5.75	5.56	2.38	7.19	0.96	1.02	0.4	1.32
709	COA	5.01	5.09	4.97	5.56	3.92	7.7	0.99	1.09	0.78	1.51
710	COA	3.89	4.28	3.75	4.34	3.4	6.08	0.96	1.01	0.87	1.42
711	COA	4.65	5.08	4.56	5.47	3.93	7.44	0.98	1.08	0.85	1.46
715	KVG	4.19	4.64	3.8	4.58	4.37	7.49	0.91	0.99	1.04	1.61

Appendix C-2d: Annual water erosion (t/ha) from winter wheat-fallow averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	1.45	1.5	4.86	4.92	5.69	5.97	3.35	3.27	3.92	3.97
3	DON	1.16	1.2	3.6	3.63	4.18	4.26	3.11	3.03	3.61	3.55
4	HZM	1.27	1.32	4.06	4.08	4.65	4.57	3.19	3.09	3.65	3.47
5	DON	1.15	1.19	3.68	3.69	4.2	4.07	3.19	3.1	3.64	3.42
6	ESH	0.94	0.97	2.63	2.64	3.05	2.99	2.81	2.73	3.25	3.09
7	COS	1.3	1.35	4.14	4.19	4.84	5.05	3.18	3.1	3.72	3.73
9	BBN	0.84	0.87	2.26	2.27	2.62	2.63	2.7	2.61	3.13	3.03
10	BBN	0.48	0.5	1.03	1.04	1.22	1.19	2.14	2.07	2.52	2.38
11	ESH	0.39	0.4	0.83	0.83	0.99	0.97	2.13	2.08	2.55	2.43
13	HZM	0.87	0.93	1.14	1.14	1.33	1.35	1.31	1.23	1.53	1.46
14	COS	0.62	0.65	1.14	1.15	1.34	1.35	1.84	1.77	2.16	2.08
15	ABT	0.58	0.61	0.7	0.7	0.82	0.83	1.21	1.15	1.43	1.37
19	HZM	0.53	0.55	0.66	0.66	0.78	0.79	1.26	1.2	1.49	1.43
20	LAD	0.49	0.51	0.55	0.55	0.65	0.66	1.11	1.06	1.33	1.28
22	COS	0.54	0.57	0.44	0.43	0.52	0.53	0.83	0.77	0.97	0.93
27	DON	1.55	1.66	0.6	0.6	0.73	0.76	0.39	0.36	0.47	0.46
28	HZM	1.18	1.22	3.56	3.6	4.16	4.32	3.03	2.94	3.53	3.53
32	HRT	0.47	0.49	0.37	0.37	0.45	0.47	0.8	0.77	0.96	0.96
33	HRT	0.48	0.5	0.42	0.42	0.51	0.52	0.87	0.84	1.05	1.03
36	COS	0.93	1	0.6	0.61	0.76	0.8	0.64	0.61	0.81	0.8
47	DON	0.99	1.15	0.9	0.95	1.19	1.25	0.91	0.82	1.2	1.08
48	DON	0.51	0.54	0.46	0.46	0.57	0.56	0.9	0.86	1.11	1.05
49	TAG	0.51	0.53	0.43	0.43	0.53	0.53	0.85	0.81	1.04	0.99
51	SAD	0.34	0.36	0.38	0.38	0.48	0.47	1.1	1.07	1.4	1.32
52	VVW	0.48	0.5	0.5	0.5	0.6	0.61	1.04	1	1.26	1.21
53	TAG	0.53	0.55	0.48	0.48	0.57	0.58	0.9	0.86	1.08	1.05
54	ESH	0.27	0.29	0.32	0.33	0.42	0.41	1.17	1.14	1.53	1.43
56	ZBR	0.98	1.13	1	1.04	1.3	1.37	1.02	0.92	1.33	1.21
59	FAL	0.49	0.55	0.5	0.51	0.66	0.68	1.02	0.93	1.35	1.24
60	BBN	0.41	0.42	0.43	0.42	0.56	0.55	1.05	1.01	1.38	1.33
61	RYF	0.29	0.3	0.46	0.46	0.57	0.56	1.6	1.56	1.99	1.9
62	DVS	0.2	0.21	0.27	0.26	0.35	0.35	1.3	1.25	1.73	1.69
64	JUH	0.29	0.29	0.36	0.36	0.47	0.46	1.27	1.23	1.66	1.61
68	HRT	0.25	0.25	0.36	0.36	0.47	0.46	1.47	1.42	1.88	1.81
70	JUH	0.24	0.25	0.4	0.39	0.51	0.5	1.63	1.59	2.08	2
71	BBN	0.3	0.3	0.54	0.54	0.67	0.66	1.84	1.79	2.26	2.17
72	BLY	0.29	0.3	0.51	0.51	0.63	0.62	1.77	1.72	2.19	2.09
73	RYF	0.53	0.54	1.39	1.39	1.62	1.59	2.64	2.57	3.08	2.93
74	JUH	0.33	0.33	0.72	0.72	0.87	0.85	2.22	2.16	2.67	2.57
75	DIG	0.51	0.51	0.9	0.91	1.12	1.11	1.79	1.76	2.21	2.15
76	JUH	0.26	0.27	0.39	0.39	0.5	0.49	1.48	1.45	1.91	1.86
77	LAD	0.4	0.4	0.72	0.72	0.89	0.88	1.82	1.78	2.25	2.18
78	ABT	0.32	0.33	0.51	0.5	0.64	0.63	1.56	1.54	1.98	1.92
80	BWY	0.33	0.33	0.43	0.43	0.56	0.54	1.31	1.3	1.69	1.63
81	HZM	0.38	0.39	0.51	0.51	0.66	0.65	1.34	1.33	1.74	1.69
83	BUD	0.38	0.38	0.48	0.48	0.62	0.61	1.25	1.25	1.63	1.58
84	HZM	0.38	0.38	0.47	0.47	0.61	0.59	1.23	1.23	1.6	1.55
87	NPA	0.56	0.58	0.93	0.93	1.16	1.17	1.65	1.61	2.06	2.02
88	FAL	0.54	0.55	0.84	0.85	1.07	1.07	1.56	1.53	1.97	1.93
89	JUH	1.2	1.24	3.73	3.77	4.37	4.57	3.12	3.04	3.66	3.69
91	HZM	0.56	0.59	0.83	0.83	1.02	1.03	1.47	1.41	1.81	1.76
93	DON	0.62	0.64	1.11	1.11	1.37	1.37	1.78	1.74	2.21	2.15
94	HRT	0.47	0.48	0.78	0.78	0.98	0.97	1.66	1.63	2.07	2.02
97	FAL	0.37	0.37	0.42	0.42	0.56	0.55	1.14	1.12	1.51	1.47
98	HZM	0.65	0.8	0.65	0.67	0.87	0.91	1	0.85	1.34	1.15

Appendix C-2d (Continued):

Poly #	Soil name	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	0.36	0.37	0.39	0.39	0.53	0.53	1.07	1.06	1.47	1.45
101	FAL	0.33	0.33	0.41	0.41	0.54	0.53	1.26	1.25	1.65	1.6
102	WHW	0.35	0.35	0.42	0.42	0.55	0.53	1.19	1.19	1.56	1.52
103	ABT	0.41	0.41	0.47	0.47	0.62	0.6	1.13	1.13	1.49	1.45
104	HZM	0.41	0.41	0.46	0.46	0.61	0.59	1.11	1.12	1.47	1.43
105	CTE	0.42	0.41	0.47	0.47	0.62	0.61	1.14	1.14	1.49	1.47
107	ALC	0.52	0.54	0.85	0.86	1.05	1.05	1.65	1.58	2.03	1.95
108	HZM	0.44	0.45	0.45	0.45	0.59	0.58	1.02	0.99	1.35	1.29
109	PRV	0.43	0.45	0.44	0.44	0.58	0.57	1.03	0.99	1.35	1.27
110	CTE	0.43	0.43	0.47	0.46	0.61	0.6	1.09	1.09	1.42	1.4
112	ALC	0.45	0.44	0.47	0.48	0.63	0.61	1.07	1.08	1.41	1.39
130	DVS	0.25	0.38	0.18	0.18	0.2	0.2	0.72	0.49	0.82	0.54
132	CTE	0.36	0.65	0.26	0.26	0.26	0.27	0.74	0.41	0.73	0.41
133	BBN	1.73	2.31	1.71	1.83	2.33	2.56	0.99	0.79	1.35	1.11
135	DVS	1.05	1.34	1.04	1.1	1.39	1.51	0.99	0.82	1.33	1.13
144	BBN	7.47	9.79	7.22	7.81	9.87	10.94	0.97	0.8	1.32	1.12
170	HUB	18.51	24.01	17.89	19.43	23.71	26.33	0.97	0.81	1.28	1.1
171	HUB	15.41	20.15	14.89	15.86	20.7	22.79	0.97	0.79	1.34	1.13
172	KTH	14.49	17.05	14.01	15.09	19.01	20.88	0.97	0.89	1.31	1.22
173	CUL	15.29	17.69	14.79	15.95	20.05	22	0.97	0.9	1.31	1.24
176	HRT	3.44	4.16	3.08	3.2	4.55	4.81	0.9	0.77	1.32	1.16
177	HRT	8.75	11.52	8.11	8.34	11.83	12.78	0.93	0.72	1.35	1.11
178	HPE	3.02	3.58	1.97	2.03	3.03	3.25	0.65	0.57	1	0.91
180	KNZ	4.58	5.91	3.83	3.98	5.63	6.11	0.84	0.67	1.23	1.03
181	COS	3.75	4.96	3.34	3.46	4.88	5.31	0.89	0.7	1.3	1.07
182	ATO	3.73	4.49	2.32	2.4	3.48	3.76	0.62	0.53	0.93	0.84
185	UCS	3.62	4.24	2.35	2.44	3.55	3.8	0.65	0.57	0.98	0.9
189	CUL	3.41	4.17	3	3.1	4.47	4.72	0.88	0.74	1.31	1.13
192	COA	8.77	10.4	8.24	8.78	11.53	12.52	0.94	0.84	1.32	1.2
193	MLA	10.9	12.75	10.03	10.69	14.25	15.45	0.92	0.84	1.31	1.21
194	MLA	3.52	4.08	2.73	2.82	4.17	4.41	0.78	0.69	1.18	1.08
196	LNN	2.66	2.82	0.69	0.69	1.21	1.26	0.26	0.25	0.46	0.45
197	COA	2.63	2.92	1.8	1.83	3.03	3.18	0.68	0.63	1.15	1.09
198	COA	4.02	4.67	3.5	3.64	5.28	5.61	0.87	0.78	1.31	1.2
201	HRT	17.45	20.09	16.91	18.27	22.91	25.16	0.97	0.91	1.31	1.25
211	ZOR	2.02	2.71	1.83	1.93	2.68	2.94	0.91	0.71	1.33	1.08
212	ABC	1.61	2.17	1.46	1.53	2.15	2.35	0.91	0.71	1.33	1.09
215	ABC	1.71	2.26	1.48	1.55	2.22	2.42	0.87	0.69	1.3	1.07
218	KNZ	1.23	1.52	0.89	0.92	1.46	1.57	0.73	0.6	1.19	1.03
221	EGL	0.72	0.93	0.64	0.67	0.97	1.06	0.89	0.72	1.36	1.13
224	ABC	0.74	0.97	0.66	0.69	1.01	1.09	0.88	0.71	1.35	1.13
227	TNW	0.7	0.84	0.54	0.55	0.99	1.05	0.76	0.65	1.41	1.24
231	ABC	0.4	0.41	0.23	0.23	0.56	0.58	0.57	0.56	1.42	1.41
232	MLA	0.35	0.41	0.26	0.26	0.48	0.5	0.73	0.62	1.35	1.21
233	KNZ	0.61	0.77	0.5	0.52	0.82	0.87	0.83	0.67	1.34	1.14
236	ABC	0.33	0.37	0.26	0.27	0.47	0.49	0.79	0.73	1.43	1.34
240	KNZ	0.3	0.31	0.17	0.17	0.39	0.4	0.58	0.56	1.28	1.26
246	GDI	0.28	0.29	0.32	0.33	0.59	0.6	1.12	1.12	2.07	2.08
248	GDI	0.39	0.4	0.58	0.59	0.95	0.96	1.5	1.48	2.44	2.44
250	ABC	0.4	0.41	0.51	0.51	0.9	0.91	1.25	1.25	2.24	2.24
252	UCS	2.38	2.84	1.32	1.36	2.11	2.27	0.56	0.48	0.89	0.8
253	COD	2.05	2.3	0.84	0.85	1.49	1.57	0.41	0.37	0.73	0.68
254	PIB	2.19	2.35	0.59	0.59	1.15	1.19	0.27	0.25	0.52	0.51
258	POK	0.89	0.96	0.49	0.49	1.05	1.09	0.55	0.51	1.18	1.14
259	RDW	1.21	1.3	0.6	0.6	1.31	1.36	0.49	0.46	1.08	1.04
261	NIT	0.89	0.95	0.54	0.55	1.32	1.36	0.6	0.58	1.48	1.44
264	COA	0.78	0.81	0.53	0.55	1.42	1.48	0.68	0.68	1.83	1.82

Appendix C-2d (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	0.57	0.58	0.34	0.35	0.9	0.94	0.6	0.6	1.6	1.61
271	FLU	0.61	0.62	0.43	0.44	1.07	1.09	0.71	0.71	1.75	1.76
275	RDW	0.63	0.63	0.61	0.62	1.23	1.24	0.97	0.97	1.95	1.96
279	ABC	0.52	0.52	0.53	0.54	1.03	1.04	1.02	1.02	1.97	1.98
290	ABC	0.37	0.38	0.56	0.56	0.86	0.88	1.49	1.47	2.32	2.31
291	LCY	0.46	0.47	0.82	0.82	1.18	1.2	1.8	1.76	2.58	2.57
292	TMN	0.74	0.76	1.81	1.78	2.21	2.19	2.43	2.35	2.97	2.9
296	NIT	0.37	0.38	2.13	2.17	3.13	3.2	5.73	5.78	8.41	8.54
297	GOG	0.49	0.5	1.19	1.2	1.76	1.8	2.42	2.41	3.58	3.6
301	SDN	0.55	0.56	1.78	1.8	2.71	2.76	3.21	3.24	4.88	4.96
302	LCY	0.71	0.72	2.45	2.47	3.6	3.67	3.43	3.44	5.04	5.12
306	LCY	0.59	0.59	0.83	0.83	1.41	1.42	1.42	1.41	2.4	2.42
310	FRY	1.74	1.73	1.92	1.9	3.36	3.38	1.11	1.1	1.93	1.95
311	FRY	0.84	0.84	0.79	0.79	1.55	1.56	0.94	0.94	1.85	1.86
312	FRY	1.23	1.23	1.14	1.15	2.23	2.24	0.93	0.93	1.82	1.83
315	NTW	1.13	1.15	3.11	3.04	3.68	3.61	2.74	2.65	3.25	3.15
316	LCY	1.28	1.29	3.46	3.4	4.1	4.06	2.71	2.63	3.21	3.14
317	LCY	0.85	0.85	2.32	2.31	3	3.02	2.75	2.7	3.55	3.54
320	FRY	1.07	1.08	3.08	3.07	3.9	3.99	2.88	2.85	3.65	3.7
322	LCY	1.19	1.21	2.73	2.71	4.38	4.42	2.29	2.24	3.68	3.65
323	LCY	1.21	1.23	2.73	2.71	4.19	4.23	2.25	2.2	3.45	3.43
325	LCY	1.26	1.27	2.64	2.62	3.96	4	2.09	2.06	3.14	3.15
326	LCY	1.04	1.05	2.47	2.47	3.72	3.78	2.37	2.36	3.57	3.61
334	LCY	2.22	2.22	2.21	2.16	3.78	3.79	0.99	0.97	1.7	1.71
335	FRY	1.38	1.4	2.34	2.3	4.1	4.1	1.69	1.65	2.96	2.93
337	MGS	1.2	1.2	1.6	1.57	2.56	2.57	1.33	1.3	2.14	2.14
339	LFN	1.21	1.21	1.53	1.5	2.43	2.44	1.27	1.24	2.01	2.02
341	MGS	1.49	1.5	2.03	1.99	3.48	3.48	1.37	1.33	2.34	2.32
342	LFN	1.99	2	2.21	2.15	3.71	3.71	1.11	1.08	1.86	1.86
343	FRY	2.29	2.29	2.28	2.21	3.83	3.82	1	0.97	1.68	1.67
344	BSU	1.33	1.34	1.44	1.38	2.5	2.48	1.08	1.03	1.88	1.84
345	SDN	1.19	1.21	1.23	1.16	2.19	2.16	1.03	0.96	1.84	1.79
346	PHS	1.97	1.97	1.94	1.88	3.34	3.33	0.99	0.96	1.7	1.69
347	SDN	1.41	1.41	1.29	1.27	2.47	2.47	0.92	0.9	1.76	1.75
348	SDN	1.79	1.79	1.69	1.66	3.1	3.1	0.94	0.93	1.73	1.73
350	LFN	0.87	0.87	0.7	0.7	1.46	1.47	0.81	0.81	1.68	1.7
351	LFN	0.91	0.92	0.89	0.85	1.68	1.66	0.98	0.93	1.84	1.8
352	RDW	0.67	0.69	0.62	0.58	1.21	1.19	0.92	0.85	1.8	1.73
354	BVH	1.2	1.2	1.23	1.2	1.73	1.74	1.03	1	1.44	1.45
356	EOR	0.98	0.99	0.9	0.89	1.45	1.45	0.92	0.89	1.48	1.47
357	EOR	1.08	1.09	1.07	1.04	1.75	1.74	0.99	0.95	1.62	1.6
359	RED	1.03	1.04	0.93	0.92	1.81	1.8	0.9	0.89	1.76	1.74
360	EOR	0.99	1	0.94	0.91	1.77	1.75	0.94	0.91	1.78	1.74
362	EOR	0.62	0.63	0.56	0.55	1.11	1.11	0.9	0.88	1.79	1.77
363	EOR	0.6	0.61	0.55	0.56	1.13	1.13	0.92	0.91	1.87	1.83
364	EOR	0.89	0.91	0.78	0.78	1.63	1.59	0.87	0.86	1.82	1.76
365	HND	1.01	1.03	0.91	0.92	1.85	1.84	0.9	0.89	1.83	1.79
366	DCY	1.11	1.14	1.01	1.02	2.01	2.02	0.91	0.9	1.81	1.78
367	HND	1.04	1.06	0.94	0.95	1.89	1.89	0.91	0.9	1.81	1.78
370	HND	2.1	2.17	1.96	1.99	3.82	3.87	0.93	0.92	1.82	1.78
371	WWT	1.05	1.08	0.96	0.97	1.85	1.87	0.91	0.9	1.76	1.72
372	EOR	1.12	1.13	0.99	1	1.94	1.94	0.89	0.88	1.73	1.72
374	EOR	0.94	0.95	0.84	0.84	1.49	1.49	0.9	0.88	1.58	1.57
375	WWT	0.73	0.75	0.66	0.66	1.14	1.15	0.91	0.88	1.56	1.54
376	HND	0.53	0.54	0.49	0.48	0.86	0.87	0.92	0.89	1.64	1.6
378	HND	0.35	0.37	0.32	0.32	0.6	0.6	0.92	0.88	1.71	1.65
392	AGS	1.02	1.02	0.87	0.87	1.79	1.8	0.86	0.86	1.76	1.77

Appendix C-2d (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	0.37	0.37	0.31	0.3	0.7	0.71	0.84	0.82	1.93	1.93
396	AGS	0.58	0.6	0.48	0.48	1.05	1.07	0.82	0.8	1.8	1.79
401	MGS	0.33	0.34	0.25	0.25	0.59	0.6	0.76	0.75	1.78	1.78
403	CMO	0.26	0.26	0.23	0.22	0.54	0.55	0.86	0.83	2.07	2.07
404	AGS	0.26	0.26	0.23	0.22	0.54	0.55	0.89	0.86	2.1	2.11
405	CMO	0.7	0.7	0.6	0.59	1.25	1.26	0.85	0.84	1.79	1.79
408	AGS	0.4	0.4	0.33	0.33	0.72	0.72	0.84	0.82	1.81	1.81
409	AGS	0.37	0.38	0.34	0.34	0.71	0.72	0.92	0.89	1.92	1.92
410	UCS	0.4	0.4	0.35	0.34	0.79	0.8	0.87	0.84	2	1.98
411	COA	0.8	0.82	0.7	0.69	1.56	1.59	0.87	0.84	1.95	1.94
412	CMO	0.28	0.29	0.24	0.24	0.53	0.54	0.86	0.85	1.88	1.89
416	WKN	0.36	0.37	0.3	0.3	0.64	0.65	0.82	0.8	1.77	1.75
418	MMO	1.21	1.26	0.74	0.74	1.54	1.59	0.61	0.59	1.27	1.26
420	TBY	1.57	1.66	1.03	1.03	2.09	2.16	0.66	0.62	1.33	1.3
421	HND	1.51	1.55	1.42	1.44	2.81	2.84	0.94	0.92	1.86	1.83
422	HCH	1.09	1.13	1.02	1.03	2.01	2.03	0.93	0.91	1.84	1.8
423	LET	0.33	0.35	0.31	0.31	0.61	0.62	0.92	0.89	1.81	1.76
425	HND	1.22	1.25	1.17	1.17	2.39	2.41	0.96	0.94	1.96	1.93
426	MMO	0.89	0.92	0.7	0.71	1.39	1.42	0.79	0.77	1.56	1.55
428	HND	0.66	0.69	0.64	0.64	1.31	1.32	0.96	0.93	1.97	1.92
429	FLU	0.98	1.01	0.88	0.87	1.87	1.91	0.89	0.86	1.9	1.89
430	MCO	0.7	0.73	0.65	0.65	1.32	1.37	0.92	0.89	1.88	1.88
431	AGS	0.99	1.04	0.92	0.94	1.6	1.69	0.93	0.9	1.62	1.62
432	KVG	1.88	2.01	1.72	1.8	2.79	2.99	0.92	0.89	1.49	1.49
433	POK	2.58	2.78	2.27	2.38	3.54	3.79	0.88	0.86	1.37	1.36
435	BTN	2.12	2.3	1.96	2.08	3.06	3.32	0.92	0.9	1.44	1.44
437	POK	2.02	2.17	1.88	1.97	2.97	3.21	0.93	0.91	1.47	1.48
439	COA	0.47	0.48	0.41	0.4	0.92	0.94	0.87	0.84	1.97	1.96
440	COA	1.65	1.73	1.33	1.35	2.51	2.62	0.81	0.78	1.52	1.51
441	MMO	0.96	0.98	0.72	0.72	1.46	1.5	0.75	0.73	1.53	1.52
442	WTB	1.08	1.14	0.89	0.92	1.54	1.59	0.82	0.8	1.42	1.4
443	HND	1.27	1.3	1.21	1.22	2.44	2.46	0.96	0.94	1.92	1.89
444	MET	0.79	0.8	0.78	0.79	1.52	1.54	0.99	0.98	1.93	1.92
449	KUR	0.29	0.31	0.24	0.25	0.5	0.51	0.84	0.8	1.73	1.64
451	MET	0.16	0.18	0.15	0.15	0.34	0.33	0.96	0.85	2.13	1.83
452	LET	0.17	0.19	0.12	0.12	0.26	0.25	0.73	0.66	1.53	1.36
453	CHN	0.17	0.18	0.19	0.19	0.42	0.4	1.14	1.03	2.57	2.22
457	MAB	0.16	0.17	0.2	0.2	0.47	0.44	1.31	1.14	3	2.57
458	MAB	0.13	0.14	0.17	0.15	0.39	0.37	1.31	1.04	2.96	2.57
460	WDN	0.14	0.16	0.19	0.17	0.42	0.4	1.32	1.09	2.98	2.58
461	BVL	0.15	0.16	0.19	0.19	0.44	0.42	1.31	1.16	2.99	2.57
463	HND	0.17	0.19	0.24	0.24	0.56	0.52	1.41	1.26	3.27	2.73
466	HND	0.16	0.17	0.14	0.14	0.3	0.29	0.89	0.79	1.96	1.7
467	WWT	0.22	0.24	0.17	0.18	0.36	0.36	0.78	0.73	1.62	1.5
471	HUK	0.18	0.19	0.17	0.17	0.37	0.36	0.97	0.9	2.09	1.91
472	MAB	0.16	0.17	0.18	0.17	0.39	0.37	1.13	1	2.46	2.14
473	HND	0.16	0.17	0.18	0.18	0.4	0.39	1.12	1.03	2.52	2.24
474	MAB	0.14	0.15	0.16	0.16	0.37	0.35	1.17	1.03	2.62	2.28
475	BVL	0.13	0.14	0.14	0.14	0.31	0.3	1.05	0.96	2.36	2.1
476	MAB	0.17	0.18	0.17	0.18	0.36	0.34	1.02	0.99	2.15	1.86
478	CCL	0.13	0.14	0.13	0.13	0.29	0.29	0.98	0.92	2.23	2.06
480	HUK	0.17	0.18	0.17	0.18	0.37	0.37	1.03	1	2.19	2.08
481	YTW	0.16	0.17	0.17	0.17	0.36	0.36	1.06	1.03	2.25	2.15
484	WWT	0.53	0.55	0.53	0.54	1.09	1.11	1	0.98	2.05	2.02
486	YTW	0.25	0.26	0.26	0.26	0.54	0.55	1.03	1	2.2	2.14
487	HUK	0.16	0.16	0.15	0.15	0.32	0.31	0.96	0.94	2.04	1.87
489	HUK	0.16	0.16	0.16	0.16	0.36	0.36	1	0.99	2.22	2.19

Appendix C-2d (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	0.67	0.68	0.7	0.71	1.35	1.39	1.05	1.04	2.03	2.03
496	MET	0.17	0.17	0.17	0.17	0.39	0.4	1.03	1.04	2.36	2.39
499	CVD	0.12	0.13	0.07	0.08	0.14	0.15	0.6	0.63	1.16	1.16
508	AGS	0.69	0.71	0.67	0.69	1.22	1.28	0.98	0.97	1.77	1.81
509	PHS	2.54	2.74	2.4	2.54	3.77	4.12	0.94	0.92	1.48	1.5
510	AGS	0.25	0.25	0.22	0.22	0.51	0.51	0.9	0.9	2.04	2.04
512	BVH	0.72	0.74	0.72	0.73	1.34	1.41	1	0.99	1.86	1.89
513	AGS	0.61	0.63	0.59	0.61	1.09	1.15	0.97	0.96	1.78	1.81
514	PHS	0.93	0.95	0.92	0.94	1.74	1.79	0.99	0.98	1.87	1.88
515	BVH	0.91	0.93	0.88	0.9	1.76	1.77	0.97	0.97	1.94	1.9
516	BVH	2.15	2.26	2.12	2.19	3.55	3.82	0.98	0.97	1.65	1.69
517	FLU	1.64	1.72	1.64	1.68	2.8	2.98	1	0.98	1.7	1.74
518	MGS	4.9	5.22	4.79	5.02	7.55	8.29	0.98	0.96	1.54	1.59
519	NVR	0.99	1.04	0.97	0.99	1.65	1.76	0.98	0.96	1.67	1.7
520	AGS	2.37	2.54	2.29	2.4	3.65	3.98	0.96	0.95	1.54	1.57
521	POK	5.21	5.57	5.04	5.31	7.85	8.65	0.97	0.95	1.51	1.55
523	PED	5.11	5.44	4.99	5.24	7.88	8.67	0.98	0.96	1.54	1.6
524	FLU	10.48	11.11	10.27	10.77	15.96	17.62	0.98	0.97	1.52	1.59
531	GDB	0.4	0.39	0.39	0.4	0.88	0.9	0.98	1.01	2.22	2.28
532	HKR	0.67	0.68	0.68	0.69	1.39	1.41	1	1.01	2.05	2.07
533	HND	0.41	0.41	0.42	0.42	0.92	0.95	1.04	1.03	2.27	2.31
534	MET	0.36	0.36	0.38	0.38	0.86	0.9	1.06	1.06	2.41	2.52
536	HND	0.38	0.38	0.39	0.4	0.92	0.95	1.03	1.05	2.4	2.53
537	BVH	0.7	0.71	0.69	0.71	1.44	1.47	0.97	1	2.05	2.08
538	HND	0.36	0.36	0.36	0.37	0.83	0.84	1	1.03	2.27	2.34
539	PHS	0.77	0.77	0.75	0.78	1.54	1.59	0.97	1	2	2.05
540	KLM	0.56	0.54	0.54	0.56	1.22	1.25	0.97	1.03	2.19	2.3
543	EOR	0.48	0.48	0.46	0.47	0.96	0.97	0.97	0.99	2.02	2.04
545	IRM	0.77	0.78	0.74	0.76	1.44	1.47	0.96	0.97	1.88	1.87
547	DEL	0.79	0.82	0.77	0.79	1.41	1.47	0.97	0.97	1.77	1.8
548	BVH	1.08	1.11	1.04	1.08	1.93	2	0.97	0.97	1.79	1.79
549	FLU	2.48	2.62	2.41	2.52	4.03	4.35	0.97	0.96	1.63	1.66
551	FLU	1.41	1.49	1.36	1.42	2.33	2.5	0.96	0.95	1.65	1.67
553	ATL	0.96	0.98	0.91	0.93	1.58	1.64	0.95	0.95	1.65	1.67
554	ATL	1.45	1.72	1.43	1.71	1.86	2.23	0.99	0.99	1.29	1.29
555	CYG	1.3	1.39	1.26	1.32	2.06	2.25	0.97	0.95	1.59	1.63
558	DEL	2.25	2.7	2.25	2.69	2.91	3.54	1	1	1.29	1.31
559	ATL	3.2	3.85	3.18	3.8	4.01	4.85	0.99	0.99	1.25	1.26
561	ATL	1.84	2.2	1.85	2.19	2.4	2.87	1	1	1.3	1.3
562	BGH	4.51	5.5	4.54	5.49	5.63	6.97	1.01	1	1.25	1.27
563	BSK	1.14	1.27	1.12	1.24	1.66	1.83	0.97	0.98	1.45	1.44
564	LET	2.68	3.09	2.54	2.83	4.17	4.68	0.95	0.92	1.56	1.52
565	DEL	1.71	2.04	1.7	2.02	2.25	2.71	0.99	0.99	1.32	1.33
566	DEL	3.03	3.56	2.92	3.42	4.09	4.88	0.97	0.96	1.35	1.37
567	BSK	1.03	1.17	1	1.13	1.47	1.68	0.96	0.97	1.42	1.43
568	DEL	0.36	0.36	0.35	0.35	0.68	0.7	0.97	0.98	1.89	1.94
569	IRM	0.42	0.42	0.39	0.4	0.76	0.76	0.94	0.95	1.81	1.84
570	HAN	0.27	0.26	0.26	0.26	0.54	0.55	0.96	0.98	2.01	2.09
571	HAN	0.3	0.29	0.32	0.32	0.74	0.77	1.08	1.08	2.47	2.63
572	DVG	21.47	25.01	19.31	21.84	29.69	34.75	0.9	0.87	1.38	1.39
574	LET	0.31	0.3	0.29	0.29	0.59	0.6	0.94	0.96	1.92	1.97
575	WWT	0.72	0.8	0.66	0.73	1.1	1.23	0.91	0.91	1.52	1.54
576	DMH	0.26	0.25	0.25	0.25	0.52	0.53	0.98	1	2.02	2.12
577	BZR	18.85	22.02	17.32	20.19	26.31	30.74	0.92	0.92	1.4	1.4
578	HAN	0.24	0.23	0.25	0.24	0.48	0.48	1.04	1.05	1.99	2.13
579	LET	0.47	0.5	0.43	0.46	0.76	0.83	0.91	0.91	1.62	1.65
581	HKR	0.31	0.31	0.32	0.32	0.68	0.69	1.05	1.02	2.2	2.22

Appendix C-2d (Continued):

Poly #	Soil name	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	0.3	0.29	0.32	0.3	0.65	0.66	1.07	1.07	2.19	2.33
583	HAN	0.27	0.26	0.28	0.28	0.6	0.62	1.06	1.06	2.25	2.38
584	DMH	0.31	0.3	0.32	0.31	0.71	0.73	1.05	1.06	2.31	2.46
589	HAN	0.27	0.26	0.29	0.28	0.57	0.58	1.06	1.06	2.09	2.22
590	CHN	0.12	0.13	0.16	0.13	0.37	0.36	1.33	0.94	3.04	2.67
591	BVL	0.16	0.17	0.19	0.17	0.41	0.39	1.17	0.96	2.56	2.24
592	FMT	0.17	0.19	0.19	0.18	0.43	0.42	1.13	0.96	2.51	2.2
593	CVD	0.18	0.2	0.2	0.19	0.43	0.41	1.11	0.96	2.45	2.12
595	ATP	0.11	0.14	0.14	0.13	0.39	0.38	1.26	0.97	3.53	2.79
596	FMT	0.19	0.22	0.22	0.21	0.54	0.54	1.15	0.95	2.78	2.48
598	FMT	0.21	0.23	0.23	0.21	0.56	0.56	1.12	0.93	2.68	2.4
599	MAB	0.23	0.25	0.24	0.22	0.51	0.52	1.05	0.89	2.24	2.08
600	CVD	0.25	0.28	0.25	0.24	0.58	0.57	1.01	0.85	2.32	2.07
601	MAB	0.2	0.21	0.21	0.21	0.44	0.42	1.04	0.98	2.17	1.98
602	MAB	0.22	0.23	0.23	0.22	0.48	0.48	1.06	0.95	2.21	2.08
603	MAB	0.22	0.24	0.22	0.2	0.51	0.5	0.99	0.85	2.32	2.08
605	HDY	0.24	0.24	0.27	0.27	0.61	0.62	1.16	1.12	2.59	2.58
606	CVD	0.18	0.19	0.18	0.19	0.39	0.4	1	1.02	2.14	2.17
607	CVD	0.14	0.14	0.13	0.13	0.26	0.27	0.88	0.9	1.83	1.87
608	MCT	0.14	0.13	0.14	0.14	0.3	0.3	1	1.04	2.15	2.26
609	TIY	0.27	0.26	0.35	0.35	0.77	0.79	1.27	1.34	2.83	3.02
610	BVL	0.2	0.2	0.22	0.22	0.52	0.52	1.09	1.08	2.53	2.6
611	HUK	0.18	0.18	0.21	0.21	0.48	0.49	1.14	1.19	2.59	2.74
613	CCL	0.1	0.1	0.1	0.1	0.23	0.23	1	1.06	2.21	2.41
615	CVD	0.24	0.26	0.21	0.19	0.55	0.54	0.87	0.75	2.27	2.08
616	CHN	0.29	0.31	0.25	0.23	0.66	0.66	0.88	0.74	2.37	2.11
617	FMT	0.27	0.28	0.25	0.23	0.68	0.66	0.93	0.82	2.55	2.32
618	CHN	0.28	0.3	0.27	0.25	0.68	0.66	0.96	0.84	2.44	2.19
619	FMT	0.27	0.28	0.27	0.25	0.68	0.68	1	0.88	2.58	2.38
620	MAB	0.29	0.31	0.3	0.29	0.77	0.76	1.04	0.95	2.68	2.48
621	TTH	0.42	0.45	0.38	0.39	0.94	0.93	0.91	0.85	2.24	2.07
622	TTH	0.41	0.44	0.38	0.39	0.95	0.94	0.93	0.88	2.31	2.13
623	ZRB	0.4	0.43	0.4	0.4	0.96	0.95	0.98	0.92	2.38	2.2
624	THA	0.55	0.59	0.49	0.51	1.16	1.15	0.89	0.85	2.09	1.93
626	SIL	0.09	0.09	0.22	0.22	0.62	0.61	2.44	2.37	6.77	6.56
627	MAB	0.14	0.15	0.23	0.23	0.64	0.63	1.62	1.52	4.51	4.25
628	BVL	0.17	0.18	0.22	0.22	0.64	0.63	1.29	1.2	3.73	3.46
629	SIL	0.16	0.17	0.23	0.22	0.65	0.64	1.41	1.31	4.04	3.76
631	MAB	0.21	0.22	0.2	0.19	0.65	0.62	0.96	0.87	3.11	2.83
632	MAB	0.24	0.26	0.2	0.19	0.7	0.68	0.84	0.74	2.9	2.67
633	MAB	0.32	0.35	0.28	0.27	0.8	0.79	0.86	0.76	2.46	2.28
634	MAB	0.19	0.21	0.2	0.19	0.63	0.61	1.02	0.91	3.26	2.95
635	MAB	0.24	0.26	0.22	0.21	0.69	0.67	0.92	0.82	2.88	2.62
637	MSN	0.39	0.43	0.35	0.34	0.93	0.93	0.88	0.79	2.36	2.19
638	ZRB	0.24	0.26	0.22	0.21	0.7	0.68	0.9	0.8	2.86	2.6
639	PUR	0.95	1.09	0.91	0.99	1.65	1.8	0.96	0.91	1.74	1.65
641	MAB	0.33	0.36	0.29	0.27	0.78	0.77	0.87	0.76	2.34	2.14
642	MAB	0.33	0.37	0.28	0.26	0.77	0.75	0.83	0.69	2.29	2.01
643	CHN	0.27	0.29	0.24	0.23	0.6	0.6	0.88	0.77	2.22	2.04
645	DLB	3.59	4.15	3.52	3.9	5.78	6.45	0.98	0.94	1.61	1.55
648	CFD	0.15	0.16	0.14	0.13	0.35	0.34	0.94	0.85	2.27	2.19
649	BVL	0.37	0.35	0.31	0.3	0.74	0.73	0.83	0.84	1.98	2.07
650	MAB	0.23	0.22	0.2	0.19	0.5	0.49	0.87	0.88	2.15	2.28
651	RDM	0.6	0.67	0.55	0.6	0.96	1.07	0.91	0.9	1.59	1.61
653	LET	1.57	1.78	1.42	1.58	2.31	2.64	0.91	0.89	1.47	1.49
654	PUY	0.23	0.23	0.22	0.23	0.41	0.43	0.95	0.97	1.79	1.87
655	DEL	7.76	8.99	7.31	8.39	10.78	12.72	0.94	0.93	1.39	1.42

Appendix C-2d (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	5.96	6.82	5.47	6.16	8.49	9.87	0.92	0.9	1.43	1.45
657	LET	4.69	5.41	4.27	4.79	6.72	7.77	0.91	0.89	1.43	1.43
658	CMY	1.16	1.32	1.07	1.19	1.77	2	0.92	0.9	1.52	1.52
659	DEL	15.85	18.08	14.64	16.58	22.45	26.19	0.92	0.92	1.42	1.45
660	CVD	0.12	0.12	0.13	0.13	0.28	0.28	1.01	1.06	2.24	2.38
661	RDM	0.65	0.7	0.58	0.62	1.05	1.16	0.89	0.88	1.62	1.65
663	LET	2.17	2.45	1.95	2.18	3.23	3.66	0.9	0.89	1.49	1.49
664	RDM	1.77	2	1.58	1.74	2.63	3	0.89	0.87	1.48	1.5
666	PUR	1.2	1.39	1.18	1.28	2.02	2.24	0.98	0.93	1.69	1.61
667	LET	2	2.3	1.92	2.13	3.22	3.58	0.96	0.92	1.61	1.56
669	LOB	1.41	1.53	1.37	1.47	2.25	2.46	0.97	0.96	1.59	1.6
671	PHS	1.45	1.53	1.39	1.45	2.32	2.49	0.96	0.95	1.6	1.63
672	PED	1.35	1.43	1.29	1.35	2.16	2.34	0.96	0.94	1.6	1.63
673	MMO	1.91	2.06	1.84	1.94	2.98	3.28	0.96	0.94	1.57	1.59
675	BTN	7.94	8.55	7.63	8.06	11.88	13.17	0.96	0.95	1.5	1.54
676	CYG	10	10.64	9.76	10.26	15.18	16.79	0.98	0.96	1.52	1.58
677	BEN	3.07	3.32	2.95	3.13	4.68	5.17	0.96	0.94	1.53	1.56
680	PNC	1.88	2.04	1.74	1.86	2.91	3.19	0.93	0.91	1.55	1.56
681	CYG	2.25	2.44	2.16	2.3	3.55	3.9	0.96	0.94	1.57	1.6
682	BEN	5.06	5.56	4.75	5.1	7.51	8.35	0.94	0.92	1.48	1.5
683	HUB	11.9	13.16	10.71	11.55	16.08	17.95	0.9	0.88	1.35	1.36
684	CAR	5.06	5.59	4.53	4.91	7.23	8.07	0.9	0.88	1.43	1.44
686	LOB	1.5	1.61	1.45	1.54	2.45	2.67	0.97	0.95	1.64	1.65
689	CAR	7.38	8.15	6.33	6.87	9.98	11.17	0.86	0.84	1.35	1.37
690	RMY	7.86	8.6	7.41	7.94	11.59	12.91	0.94	0.92	1.47	1.5
691	HUB	12.7	14.1	10.98	11.94	16.96	19.05	0.86	0.85	1.34	1.35
692	BTN	12.2	13.47	11.02	11.91	17.13	19.2	0.9	0.88	1.4	1.43
693	RMY	11.16	11.94	10.74	11.34	16.64	18.43	0.96	0.95	1.49	1.54
694	HUB	9.23	10.07	8.34	8.91	12.58	13.96	0.9	0.89	1.36	1.39
695	BTN	6.21	6.84	5.43	5.82	7.95	8.76	0.87	0.85	1.28	1.28
696	BTN	9.44	10.4	8.15	8.73	11.8	12.99	0.86	0.84	1.25	1.25
698	MYW	15.07	16.69	12.76	13.71	18.2	20.08	0.85	0.82	1.21	1.2
699	HUB	9.6	10.44	8.08	8.58	11.92	12.93	0.84	0.82	1.24	1.24
702	CVL	2.62	2.82	2.24	2.34	3.48	3.69	0.86	0.83	1.33	1.31
703	HGV	5.85	6.27	4.87	5.07	7.45	7.86	0.83	0.81	1.27	1.25
705	MCO	7.98	8.27	6.48	6.62	10.1	10.44	0.81	0.8	1.27	1.26
708	MLA	8.9	9.75	7.58	7.99	11.22	11.99	0.85	0.82	1.26	1.23
709	COA	5.43	5.99	4.69	4.89	7.17	7.64	0.86	0.82	1.32	1.28
710	COA	3.81	4.16	3.26	3.4	5.1	5.41	0.86	0.82	1.34	1.3
711	COA	4.3	4.66	3.66	3.79	5.78	6.1	0.85	0.81	1.34	1.31
715	KVG	2.63	2.92	2.14	2.19	3.61	3.8	0.81	0.75	1.37	1.3

Appendix C-3a: *Annual continuous wheat yield (t/ha) averaged by Soil Landscape Polygones in Alberta under current atmospheric* CO_2 *level (BL) and future climate at atmospheric* CO_2 *concentration two times the current level* (SN_{tp}, SN_t).

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	1.34	1.34	1.64	1.64	1.64	1.64	1.23	1.23	1.23	1.23
3	DON	1.42	1.42	1.72	1.72	1.72	1.72	1.21	1.21	1.21	1.21
4	HZM	1.45	1.46	1.74	1.74	1.73	1.73	1.2	1.2	1.19	1.19
5	DON	1.5	1.5	1.8	1.8	1.78	1.78	1.2	1.2	1.19	1.19
6	ESH	1.47	1.47	1.77	1.77	1.78	1.78	1.2	1.2	1.21	1.21
7	COS	1.39	1.39	1.71	1.71	1.7	1.7	1.23	1.23	1.22	1.22
9	BBN	1.55	1.55	1.94	1.94	1.89	1.9	1.25	1.25	1.22	1.22
10	BBN	1.64	1.68	2.08	2.08	2.05	2.05	1.27	1.24	1.25	1.22
11	ESH	1.65	1.67	2.08	2.08	2.04	2.04	1.26	1.24	1.24	1.22
13	HZM	1.59	1.59	2.01	2.01	1.98	1.98	1.26	1.26	1.25	1.24
14	COS	1.62	1.63	2.06	2.06	2	2	1.27	1.27	1.23	1.23
15	ABT	1.65	1.65	2.1	2.1	2.06	2.06	1.28	1.27	1.25	1.25
19	HZM	1.65	1.66	2.11	2.11	2.07	2.07	1.28	1.27	1.25	1.25
20	LAD	1.67	1.69	2.13	2.13	2.1	2.1	1.28	1.26	1.26	1.24
22	COS	1.67	1.67	2.14	2.14	2.13	2.13	1.28	1.28	1.27	1.27
27	DON	1.55	1.55	1.93	1.93	1.9	1.91	1.24	1.24	1.23	1.23
28	HZM	1.43	1.43	1.76	1.76	1.75	1.75	1.23	1.23	1.23	1.22
32	HRT	1.74	1.75	2.22	2.22	2.14	2.14	1.27	1.27	1.23	1.23
33	HRT	1.72	1.73	2.2	2.2	2.13	2.13	1.27	1.27	1.23	1.23
36	COS	1.68	1.68	2.1	2.1	2.04	2.05	1.26	1.25	1.22	1.22
47	DON	1.57	1.59	1.95	1.95	1.93	1.94	1.24	1.22	1.22	1.22
48	DON	1.64	1.67	2.06	2.06	2.03	2.03	1.26	1.24	1.24	1.22
49	TAG	1.67	1.7	2.11	2.11	2.07	2.07	1.26	1.24	1.24	1.22
51	SAD	1.68	1.74	2.15	2.15	2.13	2.13	1.28	1.23	1.27	1.22
52	VVW	1.69	1.72	2.15	2.15	2.1	2.1	1.27	1.25	1.24	1.23
53	TAG	1.7	1.71	2.16	2.16	2.11	2.11	1.27	1.26	1.24	1.23
54	ESH	1.67	1.74	2.14	2.14	2.12	2.13	1.28	1.23	1.27	1.22
56	ZBR	1.53	1.55	1.89	1.89	1.88	1.9	1.23	1.22	1.23	1.22
59	FAL	1.5	1.51	1.82	1.82	1.81	1.83	1.21	1.21	1.21	1.22
60	BBN	1.51	1.51	1.82	1.82	1.82	1.83	1.21	1.21	1.21	1.21
61	RYF	1.63	1.68	2.06	2.06	2.04	2.05	1.26	1.23	1.25	1.22
62	DVS	1.41	1.41	1.67	1.67	1.66	1.73	1.19	1.18	1.18	1.23
64	JUH	1.47	1.47	1.77	1.77	1.76	1.8	1.2	1.2	1.2	1.22
68	HRT	1.48	1.49	1.8	1.8	1.78	1.83	1.21	1.2	1.2	1.23
70	JUH	1.59	1.6	1.97	1.97	1.93	1.95	1.24	1.23	1.21	1.22
71	BBN	1.64	1.66	2.06	2.06	2.02	2.03	1.26	1.24	1.23	1.22
72	BLY	1.62	1.66	2.04	2.04	2.02	2.03	1.26	1.23	1.24	1.22
73	RYF	1.63	1.64	2.04	2.04	1.99	2	1.25	1.24	1.22	1.21
74	JUH	1.7	1.71	2.15	2.15	2.08	2.08	1.26	1.26	1.22	1.22
75	DIG	1.52	1.53	1.85	1.85	1.85	1.86	1.22	1.21	1.21	1.22
76	JUH	1.57	1.57	1.93	1.93	1.9	1.92	1.23	1.23	1.21	1.22
77	LAD	1.6	1.6	1.97	1.97	1.94	1.95	1.23	1.23	1.21	1.22
78	ABT	1.56	1.57	1.92	1.92	1.89	1.91	1.23	1.22	1.21	1.22
80	BWY	1.51	1.52	1.83	1.83	1.83	1.84	1.21	1.21	1.21	1.21
81	HZM	1.53	1.54	1.86	1.86	1.85	1.86	1.21	1.21	1.21	1.21
83	BUD	1.53	1.53	1.85	1.85	1.85	1.86	1.21	1.21	1.21	1.22
84	HZM	1.53	1.54	1.85	1.85	1.85	1.87	1.21	1.2	1.21	1.22
87	NPA	1.46	1.47	1.78	1.78	1.81	1.82	1.21	1.21	1.24	1.24
88	FAL	1.46	1.47	1.78	1.78	1.81	1.82	1.21	1.21	1.24	1.24
89	JUH	1.38	1.39	1.69	1.69	1.69	1.69	1.22	1.22	1.22	1.22
91	HZM	1.48	1.48	1.79	1.79	1.8	1.8	1.21	1.21	1.22	1.22
93	DON	1.44	1.44	1.74	1.74	1.8	1.8	1.21	1.21	1.25	1.25
94	HRT	1.53	1.53	1.86	1.86	1.85	1.85	1.21	1.21	1.21	1.21
97	FAL	1.53	1.54	1.88	1.88	1.88	1.9	1.23	1.22	1.22	1.23
98	HZM	1.56	1.59	1.93	1.94	1.94	1.95	1.24	1.22	1.24	1.23

Appendix C-3a (Continued):

Poly #	Soil name	BL		SN_i		SN_w		SN/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	1.64	1.65	2.09	2.09	2.09	2.09	1.27	1.27	1.27	1.27
101	FAL	1.53	1.53	1.87	1.87	1.86	1.88	1.22	1.22	1.22	1.23
102	WHW	1.55	1.55	1.89	1.89	1.89	1.9	1.22	1.22	1.22	1.22
103	ABT	1.56	1.57	1.89	1.89	1.89	1.93	1.21	1.2	1.21	1.23
104	HZM	1.58	1.59	1.93	1.93	1.93	1.97	1.22	1.21	1.22	1.23
105	CTE	1.62	1.65	2.04	2.04	2.04	2.05	1.25	1.23	1.25	1.24
107	ALC	1.51	1.52	1.83	1.84	1.84	1.87	1.21	1.21	1.22	1.23
108	HZM	1.58	1.59	1.9	1.9	1.91	1.97	1.21	1.2	1.21	1.24
109	PRV	1.58	1.6	1.93	1.94	1.94	1.98	1.22	1.21	1.23	1.23
110	CTE	1.65	1.69	2.1	2.1	2.1	2.11	1.27	1.24	1.27	1.24
112	ALC	1.61	1.64	1.98	1.98	1.98	2.02	1.23	1.21	1.23	1.24
130	DVS	1.31	1.31	1.48	1.53	1.53	1.55	1.13	1.17	1.17	1.18
132	CTE	1.27	1.27	1.49	1.49	1.49	1.56	1.17	1.18	1.18	1.23
133	BBN	1.5	1.51	1.83	1.83	1.84	1.85	1.22	1.21	1.23	1.23
135	DVS	1.5	1.51	1.82	1.82	1.82	1.83	1.21	1.21	1.22	1.21
144	BBN	1.36	1.36	1.59	1.59	1.62	1.62	1.17	1.17	1.19	1.19
170	HUB	1.34	1.34	1.6	1.6	1.63	1.63	1.19	1.19	1.21	1.21
171	HUB	1.38	1.38	1.6	1.6	1.66	1.64	1.16	1.16	1.2	1.19
172	KTH	1.39	1.39	1.61	1.61	1.67	1.67	1.15	1.15	1.2	1.2
173	CUL	1.4	1.4	1.61	1.61	1.68	1.68	1.15	1.15	1.2	1.2
176	HRT	1.4	1.4	1.61	1.61	1.62	1.62	1.15	1.15	1.16	1.16
177	HRT	1.41	1.41	1.64	1.63	1.68	1.67	1.16	1.16	1.19	1.19
178	HPE	1.48	1.48	1.78	1.77	1.78	1.78	1.2	1.2	1.2	1.21
180	KNZ	1.44	1.44	1.7	1.69	1.71	1.71	1.18	1.18	1.19	1.19
181	COS	1.42	1.41	1.64	1.64	1.66	1.66	1.16	1.16	1.17	1.17
182	ATO	1.5	1.5	1.81	1.81	1.82	1.82	1.21	1.21	1.21	1.21
185	UCS	1.49	1.49	1.8	1.79	1.81	1.81	1.21	1.2	1.21	1.21
189	CUL	1.41	1.41	1.62	1.62	1.63	1.63	1.15	1.15	1.16	1.16
192	COA	1.4	1.4	1.63	1.62	1.66	1.66	1.16	1.16	1.18	1.18
193	MLA	1.4	1.4	1.65	1.63	1.68	1.68	1.18	1.16	1.2	1.2
194	MLA	1.46	1.46	1.73	1.72	1.74	1.74	1.19	1.18	1.2	1.2
196	LNN	1.56	1.56	1.92	1.92	1.93	1.93	1.23	1.23	1.24	1.24
197	COA	1.48	1.48	1.8	1.78	1.8	1.8	1.22	1.2	1.22	1.22
198	COA	1.43	1.43	1.69	1.66	1.7	1.7	1.18	1.17	1.19	1.19
201	HRT	1.4	1.4	1.61	1.61	1.69	1.68	1.15	1.15	1.21	1.21
211	ZOR	1.41	1.39	1.62	1.62	1.63	1.62	1.15	1.17	1.16	1.17
212	ABC	1.41	1.38	1.62	1.62	1.63	1.62	1.15	1.18	1.16	1.18
215	ABC	1.41	1.39	1.64	1.64	1.64	1.64	1.16	1.18	1.16	1.18
218	KNZ	1.43	1.43	1.68	1.68	1.68	1.68	1.17	1.18	1.18	1.18
221	EGL	1.4	1.4	1.61	1.61	1.61	1.61	1.15	1.15	1.15	1.15
224	ABC	1.41	1.4	1.62	1.62	1.62	1.62	1.15	1.15	1.15	1.16
227	TNW	1.42	1.42	1.67	1.67	1.67	1.67	1.17	1.17	1.17	1.17
231	ABC	1.45	1.45	1.72	1.72	1.72	1.72	1.18	1.19	1.18	1.19
232	MLA	1.42	1.42	1.65	1.65	1.65	1.65	1.16	1.16	1.16	1.16
233	KNZ	1.42	1.42	1.64	1.64	1.64	1.64	1.16	1.16	1.16	1.16
236	ABC	1.42	1.42	1.64	1.65	1.64	1.65	1.16	1.16	1.16	1.16
240	KNZ	1.44	1.44	1.69	1.69	1.69	1.69	1.17	1.17	1.17	1.17
246	GDI	1.43	1.43	1.66	1.67	1.66	1.67	1.16	1.16	1.16	1.16
248	GDI	1.43	1.44	1.67	1.67	1.67	1.67	1.16	1.16	1.16	1.16
250	ABC	1.47	1.48	1.74	1.74	1.74	1.75	1.18	1.18	1.18	1.18
252	UCS	1.49	1.48	1.78	1.78	1.79	1.79	1.2	1.2	1.21	1.21
253	COD	1.51	1.51	1.84	1.84	1.84	1.84	1.22	1.22	1.22	1.22
254	PIB	1.55	1.55	1.91	1.91	1.92	1.92	1.24	1.23	1.24	1.24
258	POK	1.63	1.63	2.07	2.08	2.07	2.08	1.27	1.27	1.27	1.27
259	RDW	1.54	1.54	1.91	1.91	1.91	1.92	1.24	1.24	1.24	1.24
261	NIT	1.53	1.53	1.89	1.9	1.9	1.9	1.24	1.24	1.24	1.24
264	COA	1.46	1.46	1.79	1.79	1.79	1.79	1.22	1.22	1.22	1.22

Appendix C-3a (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	1.46	1.46	1.76	1.76	1.76	1.76	1.2	1.2	1.2	1.2
271	FLU	1.65	1.65	2.07	2.09	2.07	2.09	1.26	1.27	1.26	1.27
275	RDW	1.69	1.69	2.11	2.13	2.11	2.13	1.25	1.26	1.25	1.26
279	ABC	1.57	1.57	1.9	1.91	1.9	1.91	1.21	1.22	1.21	1.22
290	ABC	1.42	1.42	1.64	1.64	1.64	1.65	1.15	1.15	1.16	1.16
291	LCY	1.42	1.42	1.64	1.65	1.65	1.65	1.16	1.16	1.16	1.16
292	TMN	1.42	1.42	1.63	1.63	1.64	1.64	1.15	1.15	1.16	1.16
296	NIT	1.43	1.43	1.66	1.66	1.66	1.66	1.16	1.16	1.16	1.16
297	GOG	1.44	1.44	1.68	1.68	1.68	1.69	1.17	1.16	1.17	1.17
301	SDN	1.47	1.47	1.73	1.73	1.73	1.74	1.18	1.18	1.18	1.18
302	LCY	1.46	1.47	1.73	1.73	1.74	1.75	1.18	1.18	1.19	1.19
306	LCY	1.49	1.5	1.77	1.78	1.77	1.78	1.19	1.19	1.19	1.19
310	FRY	1.65	1.68	2.11	2.12	2.12	2.15	1.28	1.26	1.28	1.28
311	FRY	1.66	1.67	2.08	2.09	2.08	2.1	1.25	1.25	1.25	1.26
312	FRY	1.66	1.67	2.1	2.11	2.1	2.11	1.26	1.26	1.26	1.27
315	NTW	1.42	1.42	1.64	1.64	1.66	1.66	1.16	1.16	1.17	1.17
316	LCY	1.42	1.42	1.65	1.65	1.68	1.68	1.16	1.16	1.18	1.18
317	LCY	1.43	1.43	1.66	1.66	1.68	1.69	1.16	1.16	1.18	1.18
320	FRY	1.43	1.43	1.66	1.66	1.71	1.71	1.16	1.16	1.2	1.2
322	LCY	1.43	1.44	1.72	1.72	1.75	1.75	1.2	1.2	1.22	1.22
323	LCY	1.45	1.46	1.75	1.75	1.78	1.78	1.2	1.2	1.22	1.22
325	LCY	1.48	1.49	1.79	1.79	1.82	1.83	1.21	1.2	1.23	1.23
326	LCY	1.49	1.51	1.8	1.8	1.81	1.83	1.21	1.19	1.22	1.21
334	LCY	1.68	1.73	2.2	2.2	2.2	2.25	1.31	1.27	1.31	1.3
335	FRY	1.51	1.52	1.87	1.87	1.88	1.9	1.24	1.23	1.25	1.24
337	MGS	1.66	1.66	2.09	2.09	2.1	2.11	1.26	1.26	1.27	1.27
339	LFN	1.68	1.68	2.12	2.12	2.13	2.13	1.27	1.26	1.27	1.27
341	MGS	1.6	1.62	2.03	2.03	2.03	2.06	1.27	1.25	1.27	1.27
342	LFN	1.64	1.69	2.13	2.13	2.14	2.18	1.3	1.26	1.3	1.29
343	FRY	1.68	1.74	2.21	2.21	2.21	2.27	1.31	1.27	1.32	1.31
344	BSU	1.71	1.73	2.2	2.2	2.2	2.22	1.29	1.27	1.29	1.29
345	SDN	1.73	1.75	2.23	2.23	2.23	2.25	1.29	1.27	1.29	1.29
346	PHS	1.7	1.75	2.22	2.23	2.23	2.27	1.31	1.27	1.31	1.3
347	SDN	1.75	1.77	2.27	2.27	2.27	2.29	1.29	1.29	1.29	1.29
348	SDN	1.73	1.76	2.26	2.26	2.26	2.29	1.3	1.29	1.3	1.3
350	LFN	1.75	1.76	2.23	2.24	2.23	2.24	1.27	1.27	1.27	1.27
351	LFN	1.75	1.76	2.24	2.24	2.24	2.25	1.28	1.27	1.28	1.28
352	RDW	1.75	1.76	2.23	2.23	2.23	2.24	1.27	1.27	1.27	1.27
354	BVH	1.75	1.76	2.24	2.24	2.24	2.25	1.28	1.27	1.28	1.28
356	EOR	1.69	1.69	2.18	2.18	2.24	2.25	1.29	1.29	1.33	1.33
357	EOR	1.72	1.72	2.21	2.21	2.23	2.24	1.29	1.28	1.3	1.3
359	RED	1.7	1.71	2.24	2.24	2.25	2.25	1.32	1.31	1.32	1.32
360	EOR	1.72	1.73	2.25	2.25	2.25	2.26	1.3	1.3	1.31	1.31
362	EOR	1.68	1.68	2.18	2.18	2.19	2.19	1.3	1.3	1.3	1.31
363	EOR	1.66	1.66	2.15	2.15	2.16	2.17	1.3	1.3	1.3	1.31
364	EOR	1.73	1.73	2.22	2.22	2.22	2.29	1.28	1.28	1.28	1.32
365	HND	1.68	1.68	2.15	2.15	2.16	2.2	1.28	1.28	1.29	1.31
366	DCY	1.65	1.65	2.13	2.13	2.14	2.16	1.29	1.29	1.29	1.31
367	HND	1.65	1.65	2.14	2.14	2.15	2.16	1.29	1.29	1.3	1.31
370	HND	1.58	1.58	1.98	1.98	1.99	2	1.26	1.25	1.26	1.27
371	WWT	1.55	1.55	1.97	1.97	2.01	2.02	1.27	1.27	1.3	1.31
372	EOR	1.65	1.65	2.15	2.15	2.17	2.18	1.31	1.31	1.32	1.32
374	EOR	1.65	1.65	2.12	2.12	2.18	2.19	1.29	1.29	1.33	1.33
375	WWT	1.56	1.56	2	2	2.07	2.08	1.28	1.28	1.32	1.33
376	HND	1.47	1.47	1.86	1.86	1.93	1.94	1.26	1.26	1.31	1.32
378	HND	1.39	1.39	1.73	1.73	1.82	1.82	1.25	1.25	1.31	1.31
392	AGS	1.84	1.84	2.38	2.4	2.38	2.41	1.29	1.3	1.29	1.31

Appendix C-3a (Continued):

Poly #	Soil name	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	1.97	1.98	2.56	2.62	2.56	2.62	1.3	1.33	1.3	1.33
396	AGS	1.78	1.78	2.28	2.3	2.28	2.3	1.28	1.29	1.28	1.29
401	MGS	1.76	1.76	2.31	2.32	2.31	2.32	1.31	1.31	1.31	1.31
403	CMO	2.06	2.06	2.68	2.73	2.68	2.73	1.3	1.33	1.3	1.33
404	AGS	2.1	2.1	2.75	2.82	2.74	2.82	1.31	1.34	1.31	1.34
405	CMO	1.94	1.95	2.53	2.56	2.53	2.57	1.3	1.32	1.3	1.32
408	AGS	2	2	2.58	2.59	2.58	2.59	1.29	1.3	1.29	1.3
409	AGS	2.01	2.01	2.58	2.59	2.55	2.59	1.29	1.29	1.27	1.29
410	UCS	1.93	1.93	2.49	2.5	2.48	2.5	1.29	1.3	1.29	1.3
411	COA	1.61	1.61	2.01	2.02	2.01	2.02	1.25	1.25	1.25	1.25
412	CMO	1.87	1.87	2.38	2.39	2.38	2.39	1.27	1.27	1.27	1.27
416	WKN	1.75	1.75	2.3	2.3	2.3	2.3	1.31	1.31	1.31	1.31
418	MMO	1.55	1.55	1.94	1.94	1.94	1.94	1.25	1.25	1.25	1.25
420	TBY	1.47	1.47	1.8	1.8	1.8	1.8	1.22	1.22	1.22	1.22
421	HND	1.55	1.56	1.97	1.96	2	2.01	1.27	1.26	1.29	1.29
422	HCH	1.48	1.48	1.86	1.85	1.89	1.92	1.25	1.25	1.28	1.3
423	LET	1.4	1.4	1.73	1.72	1.78	1.82	1.24	1.23	1.27	1.3
425	HND	1.46	1.47	1.85	1.84	1.93	1.94	1.26	1.26	1.32	1.32
426	MMO	1.66	1.66	2.09	2.09	2.09	2.1	1.26	1.26	1.26	1.26
428	HND	1.37	1.37	1.72	1.7	1.82	1.83	1.26	1.24	1.33	1.34
429	FLU	1.56	1.56	1.94	1.94	1.93	1.94	1.24	1.24	1.23	1.24
430	MCO	1.78	1.78	2.25	2.25	2.23	2.25	1.26	1.27	1.25	1.27
431	AGS	1.92	1.92	2.45	2.45	2.4	2.45	1.28	1.28	1.25	1.28
432	KVG	1.67	1.67	2.07	2.07	2.06	2.07	1.24	1.24	1.23	1.24
433	POK	1.65	1.65	2.02	2.02	2.01	2.02	1.23	1.23	1.22	1.23
435	BTN	1.51	1.51	1.85	1.85	1.84	1.85	1.22	1.22	1.22	1.22
437	POK	1.73	1.73	2.16	2.16	2.14	2.16	1.25	1.25	1.24	1.25
439	COA	1.85	1.85	2.36	2.37	2.35	2.37	1.28	1.28	1.28	1.28
440	COA	1.49	1.49	1.82	1.82	1.82	1.82	1.22	1.22	1.22	1.22
441	MMO	1.63	1.63	2.05	2.05	2.04	2.05	1.26	1.26	1.26	1.26
442	WTB	1.68	1.68	2.07	2.07	2.07	2.07	1.23	1.23	1.23	1.23
443	HND	1.53	1.53	1.94	1.94	1.99	2	1.27	1.26	1.3	1.31
444	MET	1.59	1.59	2.03	2.03	2.04	2.06	1.27	1.27	1.28	1.29
449	KUR	1.26	1.26	1.58	1.58	1.71	1.73	1.26	1.25	1.36	1.37
451	MET	1.18	1.18	1.56	1.56	1.75	1.75	1.33	1.32	1.48	1.48
452	LET	1.17	1.17	1.5	1.5	1.68	1.68	1.29	1.28	1.44	1.44
453	CHN	1.19	1.2	1.61	1.61	1.8	1.81	1.35	1.34	1.51	1.51
457	MAB	1.18	1.2	1.65	1.64	1.86	1.86	1.4	1.37	1.58	1.56
458	MAB	1.15	1.19	1.62	1.6	1.86	1.86	1.41	1.35	1.62	1.57
460	WDN	1.16	1.19	1.63	1.62	1.86	1.87	1.4	1.36	1.61	1.56
461	BVL	1.19	1.2	1.64	1.64	1.85	1.85	1.39	1.36	1.56	1.54
463	HND	1.2	1.2	1.69	1.68	1.89	1.89	1.41	1.4	1.57	1.57
466	HND	1.17	1.18	1.54	1.54	1.73	1.73	1.32	1.31	1.47	1.47
467	WWT	1.2	1.2	1.53	1.52	1.68	1.69	1.27	1.26	1.4	1.41
471	HUK	1.22	1.22	1.58	1.56	1.74	1.75	1.3	1.28	1.43	1.43
472	MAB	1.17	1.19	1.62	1.61	1.85	1.85	1.39	1.35	1.59	1.55
473	HND	1.21	1.22	1.61	1.6	1.79	1.8	1.34	1.32	1.48	1.48
474	MAB	1.18	1.2	1.61	1.6	1.82	1.82	1.37	1.34	1.55	1.52
475	BVL	1.19	1.2	1.59	1.57	1.79	1.79	1.34	1.31	1.5	1.49
476	MAB	1.19	1.2	1.63	1.61	1.82	1.82	1.37	1.34	1.53	1.52
478	CCL	1.21	1.22	1.57	1.56	1.75	1.75	1.3	1.28	1.44	1.44
480	HUK	1.28	1.29	1.61	1.55	1.73	1.73	1.26	1.21	1.35	1.35
481	YTW	1.3	1.3	1.62	1.54	1.72	1.73	1.25	1.18	1.33	1.33
484	WWT	1.4	1.42	1.79	1.76	1.85	1.86	1.28	1.24	1.32	1.31
486	YTW	1.32	1.34	1.7	1.66	1.79	1.79	1.28	1.23	1.35	1.33
487	HUK	1.2	1.2	1.62	1.6	1.77	1.77	1.35	1.33	1.47	1.47
489	HUK	1.26	1.28	1.67	1.63	1.77	1.77	1.32	1.28	1.4	1.39

Appendix C-3a (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	1.48	1.5	1.9	1.89	1.92	1.93	1.28	1.26	1.3	1.29
496	MET	1.3	1.32	1.73	1.68	1.8	1.81	1.33	1.27	1.38	1.37
499	CVD	1.15	1.15	1.55	1.54	1.59	1.59	1.36	1.35	1.39	1.39
508	AGS	1.85	1.85	2.37	2.37	2.34	2.37	1.28	1.28	1.26	1.28
509	PHS	1.69	1.69	2.11	2.11	2.09	2.11	1.25	1.25	1.23	1.25
510	AGS	1.74	1.74	2.19	2.19	2.19	2.2	1.26	1.26	1.26	1.26
512	BVH	1.69	1.69	2.15	2.15	2.14	2.15	1.27	1.27	1.27	1.28
513	AGS	1.84	1.84	2.35	2.35	2.32	2.35	1.28	1.28	1.26	1.28
514	PHS	1.69	1.69	2.12	2.12	2.11	2.12	1.25	1.25	1.25	1.25
515	BVH	1.69	1.69	2.12	2.12	2.12	2.12	1.25	1.25	1.25	1.25
516	BVH	1.67	1.67	2.08	2.08	2.08	2.08	1.25	1.25	1.25	1.25
517	FLU	1.69	1.69	2.1	2.1	2.1	2.1	1.24	1.24	1.24	1.24
518	MGS	1.64	1.64	2.04	2.04	2.03	2.04	1.25	1.25	1.24	1.25
519	NVR	1.96	1.96	2.5	2.5	2.45	2.5	1.28	1.28	1.25	1.28
520	AGS	1.81	1.81	2.29	2.29	2.25	2.29	1.26	1.26	1.25	1.26
521	POK	1.59	1.59	1.97	1.97	1.96	1.97	1.24	1.24	1.23	1.24
523	PED	1.58	1.59	1.99	1.99	1.99	1.99	1.26	1.25	1.26	1.25
524	FLU	1.47	1.47	1.8	1.8	1.79	1.8	1.23	1.23	1.22	1.23
531	GDB	1.61	1.61	2.07	2.07	2.07	2.07	1.29	1.28	1.29	1.29
532	HKR	1.51	1.52	1.93	1.92	1.95	1.96	1.27	1.26	1.29	1.29
533	HND	1.51	1.54	1.97	1.96	1.98	1.99	1.31	1.28	1.32	1.29
534	MET	1.58	1.6	2.06	2.05	2.07	2.08	1.3	1.28	1.31	1.3
536	HND	1.64	1.65	2.12	2.12	2.12	2.13	1.29	1.28	1.29	1.29
537	BVH	1.63	1.64	2.07	2.07	2.07	2.07	1.27	1.26	1.27	1.27
538	HND	1.69	1.7	2.19	2.19	2.19	2.2	1.29	1.28	1.29	1.29
539	PHS	1.62	1.63	2.06	2.06	2.06	2.06	1.27	1.27	1.27	1.27
540	KLM	1.58	1.59	2.02	2.02	2.02	2.02	1.27	1.27	1.27	1.27
543	EOR	1.74	1.75	2.25	2.25	2.25	2.26	1.29	1.28	1.29	1.29
545	IRM	1.73	1.74	2.2	2.21	2.21	2.21	1.28	1.27	1.28	1.27
547	DEL	1.71	1.73	2.21	2.21	2.21	2.22	1.29	1.28	1.29	1.28
548	BVH	1.67	1.69	2.12	2.13	2.13	2.13	1.27	1.26	1.27	1.26
549	FLU	1.65	1.66	2.07	2.07	2.07	2.07	1.26	1.25	1.25	1.25
551	FLU	1.65	1.66	2.11	2.11	2.11	2.11	1.28	1.27	1.28	1.27
553	ATL	1.62	1.68	2.11	2.12	2.12	2.12	1.3	1.26	1.3	1.26
554	ATL	1.62	1.69	2.17	2.21	2.17	2.21	1.34	1.31	1.34	1.31
555	CYG	1.66	1.67	2.14	2.14	2.14	2.14	1.29	1.28	1.29	1.28
558	DEL	1.68	1.76	2.27	2.33	2.27	2.33	1.35	1.33	1.35	1.33
559	ATL	1.43	1.45	1.95	1.96	1.94	1.95	1.36	1.35	1.36	1.35
561	ATL	1.46	1.49	1.94	1.96	1.94	1.96	1.34	1.32	1.34	1.32
562	BGH	1.56	1.6	2.13	2.16	2.12	2.15	1.37	1.35	1.36	1.35
563	BSK	1.6	1.68	2.11	2.12	2.11	2.13	1.32	1.27	1.32	1.27
564	LET	1.41	1.34	1.86	1.84	1.95	1.94	1.32	1.37	1.39	1.45
565	DEL	1.69	1.76	2.27	2.33	2.27	2.33	1.35	1.33	1.34	1.33
566	DEL	1.59	1.62	2.18	2.2	2.18	2.2	1.37	1.36	1.37	1.36
567	BSK	1.62	1.67	2.13	2.16	2.15	2.18	1.32	1.29	1.33	1.3
568	DEL	1.75	1.78	2.29	2.3	2.3	2.3	1.31	1.29	1.31	1.3
569	IRM	1.68	1.73	2.2	2.21	2.21	2.23	1.31	1.28	1.32	1.29
570	HAN	1.69	1.73	2.21	2.21	2.23	2.24	1.3	1.28	1.32	1.3
571	HAN	1.59	1.61	2.09	2.08	2.1	2.12	1.31	1.3	1.32	1.32
572	DVG	1.43	1.4	1.99	1.98	1.93	1.93	1.39	1.41	1.35	1.37
574	LET	1.6	1.67	2.07	2.08	2.13	2.14	1.3	1.25	1.33	1.28
575	WWT	1.47	1.49	1.92	1.92	1.96	1.97	1.31	1.28	1.34	1.32
576	DMH	1.56	1.6	2.05	2.05	2.1	2.12	1.31	1.28	1.34	1.33
577	BZR	1.46	1.4	1.97	1.96	1.96	1.96	1.35	1.4	1.35	1.4
578	HAN	1.49	1.5	1.99	1.98	2.05	2.09	1.34	1.32	1.38	1.4
579	LET	1.45	1.48	1.89	1.88	1.95	1.95	1.3	1.27	1.34	1.32
581	HKR	1.4	1.44	1.87	1.85	1.91	1.92	1.33	1.28	1.36	1.33

Appendix C-3a (Continued):

Poly #	Soil name	BL		SN_t		SN_{ψ}		SN_t/BL		SN_{ψ}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	1.52	1.54	2.03	2.02	2.06	2.09	1.33	1.31	1.35	1.36
583	HAN	1.48	1.5	1.97	1.95	2	2.03	1.33	1.3	1.35	1.35
584	DMH	1.64	1.65	2.15	2.14	2.16	2.18	1.31	1.3	1.32	1.32
589	HAN	1.49	1.5	2	1.98	2.03	2.08	1.34	1.32	1.37	1.39
590	CHN	1.11	1.19	1.6	1.58	1.89	1.89	1.43	1.33	1.7	1.59
591	BVL	1.14	1.18	1.62	1.6	1.88	1.88	1.41	1.35	1.64	1.59
592	FMT	1.15	1.17	1.61	1.57	1.88	1.88	1.4	1.35	1.63	1.61
593	CVD	1.15	1.17	1.62	1.59	1.88	1.88	1.41	1.36	1.64	1.61
595	ATP	1.12	1.13	1.54	1.47	1.9	1.9	1.38	1.3	1.7	1.68
596	FMT	1.17	1.18	1.64	1.61	1.95	1.95	1.4	1.37	1.66	1.65
598	FMT	1.18	1.18	1.65	1.62	1.95	1.95	1.4	1.37	1.65	1.65
599	MAB	1.14	1.15	1.62	1.56	1.9	1.9	1.42	1.36	1.66	1.65
600	CVD	1.21	1.21	1.68	1.65	1.93	1.93	1.4	1.37	1.6	1.6
601	MAB	1.18	1.18	1.63	1.61	1.84	1.84	1.39	1.36	1.56	1.56
602	MAB	1.15	1.16	1.62	1.57	1.86	1.86	1.4	1.36	1.61	1.61
603	MAB	1.22	1.22	1.65	1.64	1.87	1.87	1.36	1.34	1.54	1.54
605	HDY	1.22	1.22	1.64	1.62	1.85	1.85	1.35	1.33	1.53	1.52
606	CVD	1.2	1.2	1.61	1.6	1.72	1.73	1.35	1.34	1.44	1.44
607	CVD	1.23	1.24	1.66	1.64	1.75	1.76	1.34	1.33	1.42	1.42
608	MCT	1.28	1.28	1.71	1.69	1.84	1.85	1.33	1.32	1.44	1.44
609	TIY	1.26	1.26	1.67	1.66	1.85	1.85	1.32	1.32	1.46	1.46
610	BVL	1.25	1.25	1.65	1.64	1.86	1.86	1.32	1.31	1.49	1.49
611	HUK	1.29	1.29	1.73	1.7	1.9	1.9	1.34	1.31	1.47	1.47
613	CCL	1.32	1.33	1.76	1.73	1.92	1.92	1.33	1.31	1.45	1.45
615	CVD	1.25	1.25	1.66	1.65	1.9	1.89	1.33	1.32	1.52	1.51
616	CHN	1.27	1.27	1.7	1.7	1.94	1.94	1.34	1.34	1.53	1.53
617	FMT	1.28	1.28	1.75	1.75	1.97	1.97	1.37	1.37	1.54	1.54
618	CHN	1.27	1.27	1.75	1.74	1.97	1.97	1.38	1.38	1.55	1.55
619	FMT	1.24	1.24	1.73	1.73	1.97	1.97	1.39	1.39	1.58	1.58
620	MAB	1.26	1.26	1.75	1.74	1.95	1.95	1.39	1.39	1.55	1.55
621	TTH	1.24	1.24	1.73	1.72	1.9	1.9	1.4	1.39	1.54	1.54
622	TTH	1.25	1.25	1.74	1.73	1.9	1.9	1.4	1.39	1.53	1.53
623	ZRB	1.24	1.24	1.74	1.73	1.89	1.89	1.4	1.4	1.53	1.53
624	THA	1.22	1.22	1.71	1.71	1.84	1.84	1.41	1.41	1.51	1.51
626	SIL	1.3	1.3	1.8	1.79	1.99	1.99	1.39	1.39	1.54	1.54
627	MAB	1.29	1.29	1.79	1.79	1.99	1.99	1.38	1.38	1.54	1.54
628	BVL	1.3	1.3	1.8	1.79	1.99	1.99	1.38	1.37	1.53	1.53
629	SIL	1.3	1.3	1.8	1.8	2	2	1.38	1.38	1.53	1.53
631	MAB	1.33	1.33	1.83	1.82	2.03	2.03	1.37	1.37	1.52	1.52
632	MAB	1.33	1.33	1.82	1.82	2.03	2.02	1.37	1.37	1.52	1.52
633	MAB	1.32	1.32	1.81	1.8	2	1.99	1.37	1.37	1.51	1.51
634	MAB	1.33	1.33	1.83	1.82	2.03	2.02	1.37	1.37	1.52	1.52
635	MAB	1.34	1.34	1.83	1.82	2.03	2.02	1.37	1.36	1.51	1.51
637	MSN	1.32	1.32	1.82	1.8	2	1.99	1.37	1.37	1.51	1.51
638	ZRB	1.33	1.33	1.82	1.82	2.02	2.02	1.37	1.36	1.52	1.52
639	PUR	1.33	1.32	1.85	1.8	1.94	1.94	1.39	1.36	1.46	1.46
641	MAB	1.3	1.3	1.76	1.75	1.98	1.96	1.35	1.35	1.52	1.52
642	MAB	1.29	1.29	1.71	1.71	1.97	1.97	1.33	1.33	1.53	1.53
643	CHN	1.26	1.26	1.68	1.67	1.93	1.9	1.33	1.33	1.53	1.51
645	DLB	1.41	1.38	1.93	1.87	1.97	1.96	1.38	1.36	1.4	1.43
648	CFD	1.2	1.2	1.57	1.56	1.79	1.78	1.31	1.3	1.49	1.49
649	BVL	1.3	1.3	1.71	1.7	1.97	1.97	1.32	1.31	1.52	1.52
650	MAB	1.31	1.31	1.74	1.71	1.97	1.97	1.33	1.31	1.51	1.5
651	RDM	1.37	1.37	1.85	1.79	1.99	1.99	1.35	1.31	1.46	1.46
653	LET	1.36	1.36	1.84	1.83	1.89	1.89	1.35	1.35	1.39	1.39
654	PUY	1.35	1.35	1.79	1.77	1.93	1.94	1.33	1.31	1.43	1.44
655	DEL	1.47	1.48	2.03	2.03	2.02	2.02	1.38	1.37	1.37	1.37

Appendix C-3a (Continued):

Poly #	Soil name	BL		SN_l		SN_w		SN_l/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	1.38	1.37	1.89	1.89	1.92	1.92	1.38	1.38	1.39	1.4
657	LET	1.35	1.33	1.83	1.82	1.93	1.92	1.35	1.37	1.43	1.45
658	CMY	1.31	1.31	1.81	1.81	1.91	1.9	1.38	1.38	1.45	1.46
659	DEL	1.5	1.5	2.08	2.08	2.03	2.03	1.38	1.38	1.35	1.35
660	CVD	1.31	1.31	1.74	1.71	1.89	1.9	1.33	1.31	1.45	1.45
661	RDM	1.34	1.33	1.79	1.75	1.98	1.97	1.34	1.31	1.48	1.48
663	LET	1.33	1.32	1.8	1.79	1.93	1.92	1.36	1.36	1.45	1.46
664	RDM	1.33	1.32	1.8	1.78	1.91	1.91	1.35	1.35	1.44	1.44
666	PUR	1.25	1.24	1.73	1.68	1.82	1.81	1.38	1.36	1.46	1.46
667	LET	1.35	1.33	1.84	1.8	1.97	1.93	1.36	1.35	1.46	1.46
669	LOB	1.42	1.44	1.85	1.86	1.85	1.86	1.3	1.29	1.3	1.29
671	PHS	1.56	1.6	2.02	2.02	2.02	2.02	1.3	1.27	1.3	1.27
672	PED	1.61	1.63	2.07	2.07	2.07	2.08	1.29	1.27	1.29	1.28
673	MMO	1.58	1.59	2.03	2.03	2.03	2.03	1.28	1.28	1.28	1.28
675	BTN	1.49	1.49	1.85	1.85	1.85	1.85	1.25	1.24	1.24	1.24
676	CYG	1.47	1.47	1.82	1.82	1.81	1.81	1.24	1.23	1.23	1.23
677	BEN	1.58	1.59	2.02	2.02	2.02	2.02	1.28	1.27	1.27	1.27
680	PNC	1.33	1.34	1.68	1.68	1.67	1.67	1.26	1.25	1.26	1.25
681	CYG	1.46	1.47	1.87	1.87	1.86	1.87	1.27	1.27	1.27	1.27
682	BEN	1.41	1.42	1.77	1.77	1.76	1.76	1.25	1.25	1.25	1.25
683	HUB	1.43	1.43	1.74	1.74	1.74	1.74	1.22	1.22	1.22	1.22
684	CAR	1.34	1.34	1.66	1.66	1.66	1.66	1.24	1.24	1.24	1.24
686	LOB	1.38	1.39	1.77	1.78	1.77	1.77	1.28	1.28	1.28	1.27
689	CAR	1.3	1.3	1.65	1.65	1.63	1.63	1.26	1.26	1.25	1.25
690	RMY	1.44	1.44	1.79	1.79	1.78	1.78	1.25	1.24	1.24	1.24
691	HUB	1.37	1.37	1.68	1.68	1.68	1.68	1.23	1.23	1.22	1.22
692	BTN	1.42	1.42	1.74	1.74	1.73	1.73	1.22	1.22	1.22	1.22
693	RMY	1.45	1.45	1.77	1.77	1.77	1.77	1.23	1.23	1.22	1.22
694	HUB	1.46	1.46	1.79	1.79	1.78	1.79	1.22	1.22	1.22	1.22
695	BTN	1.45	1.45	1.76	1.76	1.76	1.76	1.21	1.21	1.21	1.21
696	BTN	1.48	1.48	1.79	1.79	1.79	1.79	1.21	1.21	1.21	1.21
698	MYW	1.41	1.41	1.69	1.68	1.69	1.69	1.2	1.2	1.2	1.2
699	HUB	1.46	1.46	1.73	1.73	1.73	1.73	1.19	1.19	1.19	1.19
702	CVL	1.63	1.63	1.98	1.98	1.98	1.99	1.22	1.21	1.22	1.22
703	HGV	1.49	1.49	1.77	1.76	1.78	1.78	1.19	1.18	1.19	1.19
705	MCO	1.4	1.4	1.61	1.61	1.61	1.61	1.15	1.15	1.15	1.15
708	MLA	1.42	1.42	1.66	1.64	1.67	1.67	1.18	1.16	1.18	1.18
709	COA	1.42	1.42	1.7	1.64	1.7	1.7	1.19	1.16	1.2	1.2
710	COA	1.51	1.51	1.82	1.81	1.82	1.82	1.21	1.2	1.21	1.21
711	COA	1.44	1.44	1.72	1.68	1.73	1.73	1.2	1.17	1.2	1.2
715	KVG	1.45	1.45	1.75	1.73	1.76	1.76	1.21	1.2	1.21	1.21

Appendix C-3b: Annual wheat yield (t/ha) from wheat-fallow averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	1.75	1.8	2.15	2.16	2.05	2.05	1.23	1.2	1.17	1.14
3	DON	1.88	1.91	2.28	2.29	2.17	2.18	1.21	1.2	1.15	1.14
4	HZM	1.91	1.93	2.29	2.3	2.17	2.18	1.2	1.19	1.14	1.13
5	DON	1.98	2	2.36	2.38	2.24	2.24	1.19	1.19	1.13	1.12
6	ESH	1.96	1.99	2.36	2.37	2.25	2.27	1.2	1.19	1.15	1.14
7	COS	1.83	1.87	2.24	2.25	2.13	2.13	1.22	1.2	1.16	1.14
9	BBN	2.07	2.09	2.53	2.56	2.39	2.39	1.22	1.22	1.15	1.14
10	BBN	2.24	2.29	2.72	2.78	2.55	2.56	1.21	1.21	1.14	1.12
11	ESH	2.25	2.3	2.72	2.77	2.55	2.57	1.21	1.21	1.14	1.12
13	HZM	2.12	2.16	2.6	2.63	2.41	2.42	1.23	1.22	1.14	1.12
14	COS	2.18	2.2	2.68	2.71	2.52	2.52	1.23	1.23	1.16	1.15
15	ABT	2.21	2.25	2.72	2.77	2.54	2.54	1.23	1.23	1.15	1.13
19	HZM	2.23	2.27	2.74	2.78	2.55	2.56	1.23	1.23	1.15	1.13
20	LAD	2.26	2.31	2.76	2.81	2.56	2.57	1.22	1.21	1.13	1.11
22	COS	2.24	2.32	2.76	2.8	2.53	2.53	1.23	1.21	1.13	1.09
27	DON	2	2.03	2.43	2.46	2.21	2.24	1.21	1.21	1.11	1.1
28	HZM	1.89	1.93	2.31	2.33	2.19	2.2	1.22	1.21	1.16	1.14
32	HRT	2.32	2.33	2.81	2.82	2.57	2.61	1.21	1.21	1.11	1.12
33	HRT	2.3	2.32	2.79	2.81	2.56	2.6	1.21	1.21	1.11	1.12
36	COS	2.21	2.23	2.67	2.69	2.44	2.48	1.21	1.21	1.11	1.11
47	DON	2.13	2.17	2.57	2.61	2.4	2.43	1.21	1.2	1.13	1.12
48	DON	2.22	2.27	2.68	2.73	2.49	2.51	1.21	1.2	1.12	1.11
49	TAG	2.26	2.3	2.73	2.77	2.52	2.55	1.21	1.2	1.12	1.11
51	SAD	2.32	2.39	2.81	2.88	2.61	2.62	1.21	1.2	1.13	1.1
52	VVW	2.28	2.32	2.77	2.81	2.56	2.58	1.21	1.21	1.12	1.11
53	TAG	2.28	2.31	2.76	2.79	2.54	2.57	1.21	1.21	1.12	1.11
54	ESH	2.33	2.41	2.81	2.89	2.62	2.63	1.21	1.2	1.13	1.09
56	ZBR	2.09	2.13	2.54	2.58	2.41	2.44	1.21	1.21	1.15	1.14
59	FAL	2.07	2.1	2.49	2.52	2.36	2.4	1.2	1.2	1.14	1.14
60	BBN	2.11	2.13	2.53	2.54	2.39	2.44	1.2	1.2	1.13	1.15
61	RYF	2.25	2.31	2.72	2.78	2.55	2.56	1.21	1.2	1.13	1.11
62	DVS	1.92	1.96	2.28	2.32	2.2	2.21	1.19	1.18	1.15	1.13
64	JUH	2.03	2.07	2.43	2.47	2.33	2.35	1.2	1.19	1.15	1.14
68	HRT	2.02	2.07	2.42	2.46	2.31	2.32	1.2	1.19	1.14	1.12
70	JUH	2.17	2.21	2.6	2.65	2.46	2.49	1.2	1.2	1.14	1.12
71	BBN	2.24	2.3	2.7	2.76	2.54	2.56	1.21	1.2	1.13	1.11
72	BLY	2.24	2.3	2.7	2.76	2.53	2.55	1.21	1.2	1.13	1.11
73	RYF	2.21	2.25	2.66	2.7	2.5	2.52	1.2	1.2	1.13	1.12
74	JUH	2.31	2.36	2.79	2.83	2.61	2.65	1.2	1.2	1.13	1.12
75	DIG	2.05	2.08	2.5	2.52	2.38	2.4	1.22	1.21	1.16	1.15
76	JUH	2.15	2.19	2.58	2.62	2.45	2.48	1.2	1.2	1.14	1.13
77	LAD	2.17	2.2	2.62	2.65	2.48	2.51	1.21	1.21	1.15	1.14
78	ABT	2.13	2.17	2.58	2.61	2.45	2.48	1.21	1.2	1.15	1.14
80	BWY	2.08	2.12	2.52	2.54	2.42	2.43	1.22	1.2	1.17	1.15
81	HZM	2.08	2.12	2.54	2.56	2.43	2.44	1.22	1.21	1.17	1.15
83	BUD	2.1	2.14	2.56	2.58	2.46	2.48	1.22	1.21	1.17	1.16
84	HZM	2.11	2.16	2.57	2.6	2.48	2.49	1.22	1.21	1.18	1.16
87	NPA	2	2.04	2.44	2.45	2.34	2.36	1.22	1.2	1.17	1.16
88	FAL	2	2.03	2.44	2.45	2.34	2.36	1.22	1.21	1.17	1.16
89	JUH	1.83	1.87	2.24	2.24	2.13	2.13	1.22	1.2	1.16	1.14
91	HZM	1.99	2.01	2.4	2.41	2.3	2.31	1.21	1.2	1.16	1.15
93	DON	1.97	2	2.4	2.41	2.29	2.33	1.22	1.2	1.17	1.16
94	HRT	2.06	2.08	2.51	2.52	2.39	2.41	1.22	1.21	1.16	1.16
97	FAL	2.17	2.21	2.63	2.67	2.52	2.56	1.21	1.21	1.16	1.16
98	HZM	2.21	2.27	2.73	2.79	2.63	2.68	1.23	1.23	1.19	1.18

Appendix C-3b (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	2.41	2.49	2.99	3.07	2.89	2.97	1.24	1.24	1.2	1.19
101	FAL	2.13	2.19	2.6	2.64	2.5	2.52	1.22	1.21	1.17	1.16
102	WHW	2.16	2.22	2.65	2.69	2.55	2.58	1.23	1.21	1.18	1.16
103	ABT	2.16	2.23	2.65	2.71	2.57	2.6	1.22	1.21	1.19	1.17
104	HZM	2.22	2.28	2.72	2.79	2.64	2.68	1.23	1.22	1.19	1.17
105	CTE	2.35	2.41	2.91	2.98	2.81	2.86	1.24	1.24	1.2	1.19
107	ALC	2.07	2.11	2.53	2.56	2.43	2.46	1.22	1.21	1.17	1.16
108	HZM	2.19	2.27	2.69	2.77	2.62	2.66	1.23	1.22	1.2	1.17
109	PRV	2.22	2.29	2.74	2.81	2.66	2.7	1.23	1.23	1.19	1.18
110	CTE	2.42	2.49	3.01	3.1	2.92	2.97	1.24	1.25	1.2	1.2
112	ALC	2.28	2.35	2.81	2.89	2.73	2.78	1.23	1.23	1.2	1.18
130	DVS	1.66	1.73	1.99	2.03	1.93	1.96	1.2	1.17	1.16	1.13
132	CTE	1.65	1.7	1.96	2.03	1.92	1.93	1.18	1.19	1.16	1.14
133	BBN	2.08	2.12	2.54	2.57	2.41	2.46	1.22	1.22	1.16	1.16
135	DVS	2.07	2.1	2.51	2.53	2.37	2.42	1.21	1.21	1.14	1.15
144	BBN	1.69	1.71	2.08	2.1	1.95	1.96	1.23	1.23	1.15	1.15
170	HUB	1.7	1.68	2.12	2.12	2.01	2.01	1.25	1.26	1.18	1.2
171	HUB	1.75	1.75	2.16	2.17	2.05	2.04	1.23	1.24	1.17	1.17
172	KTH	1.79	1.79	2.17	2.18	2.05	2.05	1.22	1.22	1.15	1.15
173	CUL	1.8	1.8	2.18	2.18	2.06	2.06	1.22	1.22	1.15	1.15
176	HRT	1.8	1.81	2.13	2.13	1.94	1.94	1.18	1.18	1.08	1.07
177	HRT	1.81	1.82	2.19	2.21	2.06	2.05	1.21	1.21	1.14	1.12
178	HPE	1.94	1.99	2.33	2.37	2.14	2.15	1.2	1.19	1.1	1.08
180	KNZ	1.85	1.89	2.22	2.26	2.07	2.07	1.2	1.2	1.12	1.09
181	COS	1.78	1.83	2.12	2.18	2	1.99	1.19	1.19	1.12	1.09
182	ATO	1.99	2.03	2.41	2.45	2.19	2.21	1.21	1.21	1.1	1.09
185	UCS	1.99	2.01	2.39	2.42	2.17	2.19	1.2	1.2	1.09	1.09
189	CUL	1.81	1.82	2.14	2.15	1.96	1.96	1.18	1.18	1.08	1.07
192	COA	1.81	1.81	2.16	2.16	2.01	2	1.19	1.19	1.11	1.1
193	MLA	1.82	1.82	2.18	2.18	2.04	2.03	1.19	1.19	1.12	1.11
194	MLA	1.92	1.94	2.28	2.3	2.09	2.1	1.19	1.19	1.08	1.08
196	LNN	2.12	2.16	2.58	2.62	2.31	2.35	1.21	1.21	1.09	1.09
197	COA	1.99	2	2.36	2.37	2.15	2.16	1.19	1.18	1.08	1.08
198	COA	1.87	1.88	2.21	2.22	2.02	2.03	1.18	1.18	1.08	1.08
201	HRT	1.8	1.79	2.19	2.19	2.08	2.07	1.22	1.22	1.16	1.16
211	ZOR	1.74	1.8	2.06	2.12	1.94	1.94	1.18	1.18	1.11	1.08
212	ABC	1.76	1.78	2.07	2.09	1.93	1.93	1.18	1.18	1.1	1.08
215	ABC	1.77	1.81	2.09	2.13	1.96	1.95	1.18	1.18	1.11	1.08
218	KNZ	1.84	1.86	2.16	2.18	1.99	2.01	1.18	1.17	1.08	1.08
221	EGL	1.78	1.8	2.09	2.1	1.91	1.94	1.17	1.17	1.07	1.08
224	ABC	1.79	1.8	2.1	2.11	1.92	1.95	1.17	1.17	1.07	1.08
227	TNW	1.83	1.85	2.13	2.15	1.96	1.98	1.17	1.16	1.08	1.07
231	ABC	1.89	1.91	2.21	2.22	2.03	2.05	1.17	1.16	1.08	1.07
232	MLA	1.81	1.83	2.1	2.11	1.94	1.95	1.16	1.16	1.07	1.07
233	KNZ	1.8	1.82	2.09	2.11	1.93	1.94	1.16	1.16	1.07	1.07
236	ABC	1.79	1.84	2.1	2.15	1.94	1.95	1.17	1.17	1.08	1.06
240	KNZ	1.85	1.88	2.17	2.19	2	2.01	1.17	1.17	1.08	1.07
246	GDI	1.83	1.85	2.15	2.19	1.98	1.99	1.17	1.18	1.08	1.07
248	GDI	1.87	1.85	2.19	2.21	2.03	2.03	1.17	1.19	1.09	1.1
250	ABC	1.95	1.95	2.29	2.33	2.14	2.15	1.18	1.19	1.1	1.1
252	UCS	1.95	2	2.35	2.39	2.15	2.17	1.2	1.2	1.1	1.09
253	COD	2.02	2.06	2.43	2.47	2.21	2.24	1.2	1.2	1.09	1.09
254	PIB	2.11	2.15	2.55	2.59	2.3	2.34	1.21	1.2	1.09	1.09
258	POK	2.31	2.34	2.81	2.82	2.6	2.65	1.21	1.21	1.12	1.14
259	RDW	2.12	2.15	2.54	2.56	2.32	2.37	1.2	1.19	1.1	1.1
261	NIT	2.09	2.13	2.51	2.52	2.3	2.35	1.2	1.18	1.1	1.1
264	COA	1.96	2	2.33	2.34	2.13	2.18	1.19	1.17	1.09	1.09

Appendix C-3b (Continued):

Poly #	Soil name	BL		SN_t		SN_ψ		SN_t/BL		SN_ψ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	1.93	1.96	2.28	2.29	2.09	2.12	1.18	1.17	1.08	1.08
271	FLU	2.32	2.36	2.74	2.77	2.53	2.57	1.18	1.17	1.09	1.09
275	RDW	2.37	2.41	2.81	2.85	2.61	2.65	1.18	1.18	1.1	1.1
279	ABC	2.13	2.15	2.52	2.56	2.36	2.38	1.18	1.19	1.11	1.11
290	ABC	1.84	1.82	2.16	2.18	1.98	1.99	1.17	1.2	1.08	1.09
291	LCY	1.84	1.84	2.19	2.22	2.03	2.04	1.19	1.2	1.1	1.1
292	TMN	1.84	1.85	2.2	2.23	2.07	2.07	1.2	1.21	1.13	1.12
296	NIT	1.83	1.84	2.11	2.13	2.02	2.03	1.15	1.16	1.1	1.1
297	GOG	1.88	1.88	2.22	2.25	2.08	2.09	1.18	1.2	1.11	1.11
301	SDN	1.93	1.93	2.25	2.28	2.14	2.15	1.17	1.18	1.11	1.11
302	LCY	1.92	1.93	2.25	2.27	2.15	2.16	1.17	1.18	1.12	1.12
306	LCY	1.98	2	2.36	2.4	2.23	2.24	1.19	1.2	1.12	1.12
310	FRY	2.35	2.38	2.91	2.94	2.73	2.78	1.24	1.24	1.16	1.16
311	FRY	2.33	2.36	2.79	2.83	2.61	2.64	1.2	1.2	1.12	1.12
312	FRY	2.33	2.36	2.85	2.88	2.66	2.69	1.22	1.22	1.14	1.14
315	NTW	1.85	1.88	2.23	2.25	2.12	2.12	1.21	1.2	1.14	1.13
316	LCY	1.88	1.91	2.26	2.29	2.14	2.15	1.2	1.2	1.14	1.13
317	LCY	1.88	1.89	2.23	2.27	2.11	2.11	1.19	1.2	1.12	1.12
320	FRY	1.91	1.91	2.26	2.29	2.13	2.13	1.18	1.2	1.12	1.11
322	LCY	1.95	1.96	2.33	2.38	2.18	2.19	1.19	1.21	1.12	1.12
323	LCY	1.98	2	2.38	2.42	2.23	2.24	1.2	1.22	1.13	1.12
325	LCY	2.03	2.04	2.44	2.48	2.3	2.32	1.2	1.21	1.13	1.13
326	LCY	2.02	2.03	2.4	2.43	2.28	2.31	1.19	1.2	1.13	1.14
334	LCY	2.46	2.5	3.09	3.13	2.9	2.97	1.26	1.25	1.18	1.19
335	FRY	2.1	2.12	2.54	2.59	2.39	2.42	1.21	1.23	1.14	1.14
337	MGS	2.31	2.37	2.84	2.91	2.71	2.75	1.23	1.23	1.17	1.16
339	LFN	2.34	2.4	2.88	2.95	2.75	2.79	1.23	1.23	1.18	1.16
341	MGS	2.26	2.3	2.78	2.84	2.64	2.68	1.23	1.24	1.17	1.16
342	LFN	2.39	2.43	2.99	3.05	2.83	2.88	1.25	1.25	1.18	1.19
343	FRY	2.48	2.52	3.13	3.19	2.96	3.03	1.26	1.26	1.19	1.2
344	BSU	2.46	2.51	3.06	3.13	2.91	2.97	1.24	1.25	1.18	1.18
345	SDN	2.5	2.55	3.1	3.18	2.96	3.01	1.24	1.25	1.18	1.18
346	PHS	2.49	2.54	3.12	3.17	2.94	3	1.25	1.25	1.18	1.18
347	SDN	2.5	2.56	3.09	3.14	2.9	2.94	1.24	1.23	1.16	1.15
348	SDN	2.5	2.55	3.12	3.16	2.92	2.97	1.25	1.24	1.17	1.17
350	LFN	2.43	2.48	2.94	3	2.72	2.75	1.21	1.21	1.12	1.11
351	LFN	2.48	2.53	3.03	3.1	2.86	2.9	1.22	1.23	1.15	1.15
352	RDW	2.47	2.52	3	3.08	2.83	2.87	1.21	1.22	1.15	1.14
354	BVH	2.45	2.53	3.03	3.12	2.92	2.97	1.24	1.23	1.19	1.17
356	EOR	2.45	2.5	3.06	3.14	2.92	2.99	1.25	1.26	1.19	1.19
357	EOR	2.46	2.52	3.05	3.12	2.92	2.97	1.24	1.24	1.19	1.18
359	RED	2.49	2.54	3.12	3.16	2.97	3	1.25	1.24	1.19	1.18
360	EOR	2.5	2.55	3.12	3.17	2.97	3.01	1.25	1.24	1.19	1.18
362	EOR	2.41	2.46	2.97	3	2.77	2.83	1.23	1.22	1.15	1.15
363	EOR	2.38	2.43	2.93	2.96	2.72	2.79	1.23	1.22	1.14	1.15
364	EOR	2.49	2.57	3.11	3.16	2.92	3	1.25	1.23	1.17	1.17
365	HND	2.39	2.45	2.95	2.99	2.76	2.83	1.23	1.22	1.16	1.16
366	DCY	2.36	2.4	2.89	2.92	2.71	2.76	1.23	1.22	1.15	1.15
367	HND	2.37	2.41	2.91	2.94	2.73	2.78	1.23	1.22	1.15	1.15
370	HND	2.16	2.16	2.54	2.55	2.36	2.41	1.18	1.18	1.1	1.11
371	WWT	2.2	2.24	2.66	2.7	2.52	2.56	1.21	1.21	1.14	1.15
372	EOR	2.39	2.43	2.97	3	2.82	2.85	1.24	1.23	1.18	1.17
374	EOR	2.39	2.44	2.97	3.03	2.82	2.89	1.24	1.24	1.18	1.18
375	WWT	2.26	2.3	2.78	2.84	2.64	2.71	1.23	1.23	1.17	1.18
376	HND	2.11	2.16	2.55	2.6	2.43	2.48	1.21	1.21	1.15	1.15
378	HND	1.98	2.02	2.35	2.39	2.24	2.29	1.19	1.18	1.13	1.13
392	AGS	2.66	2.72	3.19	3.24	2.96	3.01	1.2	1.19	1.11	1.11

Appendix C-3b (Continued):

Poly #	Soil name	BL		SN_t		SN_ψ		SN_t/BL		SN_ψ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	2.95	3.03	3.41	3.48	3.15	3.2	1.16	1.15	1.07	1.06
396	AGS	2.59	2.63	3.05	3.09	2.83	2.87	1.18	1.18	1.09	1.09
401	MGS	2.6	2.62	3.2	3.21	2.99	3.07	1.23	1.23	1.15	1.17
403	CMO	3.07	3.16	3.52	3.59	3.25	3.3	1.14	1.14	1.06	1.04
404	AGS	3.18	3.27	3.64	3.72	3.36	3.41	1.14	1.14	1.06	1.04
405	CMO	2.86	2.94	3.36	3.43	3.12	3.16	1.18	1.17	1.09	1.08
408	AGS	2.9	2.99	3.33	3.41	3.1	3.14	1.15	1.14	1.07	1.05
409	AGS	2.91	3.01	3.29	3.36	3.05	3.11	1.13	1.12	1.05	1.03
410	UCS	2.81	2.88	3.25	3.31	3.01	3.06	1.16	1.15	1.07	1.06
411	COA	2.26	2.29	2.68	2.7	2.47	2.49	1.18	1.18	1.09	1.09
412	CMO	2.65	2.72	3.05	3.12	2.81	2.88	1.15	1.15	1.06	1.06
416	WKN	2.59	2.6	3.19	3.2	2.99	3.07	1.23	1.23	1.16	1.18
418	MMO	2.16	2.18	2.57	2.59	2.37	2.4	1.19	1.19	1.1	1.1
420	TBY	2	2.01	2.36	2.37	2.15	2.17	1.18	1.18	1.07	1.08
421	HND	2.19	2.21	2.63	2.65	2.48	2.52	1.2	1.2	1.13	1.14
422	HCH	2.07	2.08	2.48	2.49	2.36	2.39	1.2	1.19	1.14	1.14
423	LET	1.95	1.97	2.33	2.35	2.24	2.27	1.19	1.19	1.15	1.15
425	HND	2.12	2.12	2.58	2.59	2.49	2.49	1.22	1.22	1.17	1.18
426	MMO	2.35	2.37	2.77	2.79	2.56	2.6	1.18	1.18	1.09	1.1
428	HND	1.98	1.98	2.4	2.41	2.35	2.35	1.22	1.22	1.19	1.19
429	FLU	2.18	2.2	2.57	2.59	2.36	2.38	1.18	1.18	1.09	1.08
430	MCO	2.54	2.59	2.92	2.97	2.69	2.74	1.15	1.14	1.06	1.06
431	AGS	2.77	2.85	3.13	3.19	2.9	2.96	1.13	1.12	1.05	1.04
432	KVG	2.34	2.37	2.69	2.73	2.52	2.54	1.15	1.15	1.08	1.07
433	POK	2.26	2.28	2.59	2.62	2.42	2.44	1.14	1.15	1.07	1.07
435	BTN	2.1	2.13	2.44	2.48	2.34	2.35	1.16	1.16	1.12	1.1
437	POK	2.44	2.5	2.8	2.85	2.63	2.66	1.15	1.14	1.07	1.06
439	COA	2.66	2.72	3.09	3.14	2.86	2.9	1.16	1.15	1.07	1.06
440	COA	2.03	2.04	2.35	2.36	2.16	2.17	1.16	1.16	1.06	1.06
441	MMO	2.29	2.31	2.72	2.74	2.52	2.56	1.19	1.19	1.1	1.11
442	WTB	2.31	2.32	2.62	2.66	2.43	2.47	1.13	1.15	1.05	1.06
443	HND	2.19	2.2	2.66	2.68	2.52	2.55	1.21	1.22	1.15	1.16
444	MET	2.26	2.29	2.75	2.82	2.59	2.63	1.22	1.23	1.15	1.15
449	KUR	1.8	1.8	2.25	2.21	2.22	2.2	1.25	1.23	1.23	1.22
451	MET	1.75	1.75	2.31	2.25	2.33	2.31	1.32	1.29	1.33	1.32
452	LET	1.71	1.7	2.2	2.14	2.21	2.18	1.29	1.25	1.29	1.28
453	CHN	1.79	1.79	2.39	2.34	2.43	2.42	1.33	1.31	1.35	1.35
457	MAB	1.8	1.8	2.46	2.4	2.54	2.54	1.36	1.33	1.41	1.41
458	MAB	1.77	1.76	2.43	2.36	2.56	2.56	1.37	1.34	1.44	1.45
460	WDN	1.79	1.78	2.44	2.38	2.56	2.55	1.37	1.34	1.43	1.44
461	BVL	1.81	1.81	2.44	2.4	2.52	2.52	1.35	1.33	1.39	1.39
463	HND	1.84	1.84	2.52	2.47	2.58	2.58	1.37	1.34	1.4	1.4
466	HND	1.74	1.74	2.28	2.22	2.3	2.28	1.31	1.28	1.32	1.31
467	WWT	1.74	1.74	2.21	2.16	2.2	2.17	1.27	1.24	1.26	1.25
471	HUK	1.79	1.8	2.29	2.27	2.31	2.3	1.27	1.26	1.29	1.28
472	MAB	1.78	1.77	2.41	2.37	2.53	2.53	1.35	1.34	1.42	1.43
473	HND	1.81	1.81	2.36	2.34	2.41	2.41	1.31	1.29	1.34	1.33
474	MAB	1.78	1.79	2.38	2.35	2.48	2.47	1.33	1.31	1.39	1.38
475	BVL	1.78	1.79	2.32	2.32	2.42	2.42	1.31	1.3	1.36	1.35
476	MAB	1.79	1.79	2.37	2.37	2.47	2.47	1.32	1.32	1.38	1.38
478	CCL	1.79	1.8	2.28	2.3	2.35	2.35	1.28	1.28	1.32	1.31
480	HUK	1.88	1.88	2.26	2.28	2.26	2.26	1.2	1.21	1.21	1.2
481	YTW	1.9	1.9	2.24	2.28	2.24	2.24	1.18	1.2	1.18	1.18
484	WWT	2.04	2.04	2.45	2.49	2.37	2.4	1.2	1.22	1.17	1.17
486	YTW	1.94	1.96	2.35	2.38	2.32	2.34	1.21	1.22	1.2	1.2
487	HUK	1.74	1.84	2.28	2.26	2.35	2.33	1.31	1.23	1.35	1.27
489	HUK	1.86	1.93	2.32	2.33	2.33	2.34	1.25	1.21	1.26	1.21

Appendix C-3b (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	2.12	2.13	2.56	2.62	2.43	2.45	1.2	1.23	1.14	1.15
496	MET	1.95	1.98	2.39	2.41	2.38	2.4	1.22	1.21	1.22	1.21
499	CVD	1.39	1.94	1.93	1.85	1.97	1.9	1.39	0.95	1.42	0.98
508	AGS	2.66	2.74	3.07	3.14	2.85	2.91	1.16	1.15	1.07	1.06
509	PHS	2.39	2.45	2.75	2.8	2.59	2.62	1.15	1.14	1.09	1.07
510	AGS	2.43	2.47	2.84	2.9	2.61	2.68	1.17	1.17	1.07	1.08
512	BVH	2.4	2.46	2.85	2.91	2.66	2.69	1.19	1.18	1.11	1.1
513	AGS	2.63	2.7	3.03	3.1	2.81	2.87	1.16	1.15	1.07	1.06
514	PHS	2.37	2.42	2.85	2.89	2.63	2.65	1.2	1.19	1.11	1.1
515	BVH	2.34	2.41	2.89	2.94	2.64	2.65	1.24	1.22	1.13	1.1
516	BVH	2.33	2.37	2.78	2.81	2.58	2.59	1.19	1.19	1.11	1.09
517	FLU	2.39	2.4	2.79	2.81	2.6	2.6	1.17	1.17	1.09	1.08
518	MGS	2.29	2.32	2.69	2.72	2.52	2.54	1.18	1.17	1.1	1.09
519	NVR	2.83	2.92	3.21	3.27	2.97	3.02	1.13	1.12	1.05	1.04
520	AGS	2.58	2.64	2.96	3.01	2.76	2.8	1.15	1.14	1.07	1.06
521	POK	2.22	2.25	2.6	2.63	2.46	2.47	1.17	1.17	1.11	1.1
523	PED	2.2	2.24	2.63	2.64	2.46	2.46	1.19	1.18	1.12	1.1
524	FLU	2.01	2.02	2.41	2.42	2.29	2.29	1.2	1.19	1.14	1.13
531	GDB	2.28	2.34	2.76	2.84	2.58	2.62	1.21	1.21	1.13	1.12
532	HKR	2.15	2.17	2.6	2.66	2.46	2.49	1.21	1.23	1.14	1.14
533	HND	2.18	2.21	2.65	2.71	2.53	2.58	1.21	1.23	1.16	1.16
534	MET	2.27	2.32	2.77	2.83	2.67	2.7	1.22	1.22	1.18	1.16
536	HND	2.33	2.39	2.83	2.9	2.71	2.73	1.22	1.22	1.16	1.14
537	BVH	2.28	2.33	2.77	2.85	2.57	2.6	1.21	1.22	1.12	1.11
538	HND	2.41	2.46	2.9	2.99	2.74	2.77	1.21	1.21	1.14	1.12
539	PHS	2.28	2.32	2.75	2.82	2.54	2.58	1.21	1.22	1.12	1.11
540	KLM	2.23	2.26	2.68	2.76	2.48	2.53	1.2	1.22	1.11	1.12
543	EOR	2.47	2.53	2.98	3.07	2.78	2.81	1.2	1.21	1.12	1.11
545	IRM	2.42	2.49	2.95	3.02	2.73	2.75	1.22	1.22	1.13	1.11
547	DEL	2.43	2.48	2.91	2.99	2.72	2.74	1.2	1.21	1.12	1.1
548	BVH	2.33	2.4	2.85	2.9	2.63	2.64	1.22	1.21	1.13	1.1
549	FLU	2.29	2.35	2.78	2.82	2.57	2.58	1.21	1.2	1.12	1.1
551	FLU	2.3	2.36	2.76	2.8	2.57	2.58	1.2	1.18	1.12	1.09
553	ATL	2.31	2.34	2.75	2.83	2.61	2.62	1.19	1.21	1.13	1.12
554	ATL	2.32	2.35	2.89	2.96	2.7	2.73	1.24	1.26	1.16	1.16
555	CYG	2.34	2.42	2.75	2.75	2.56	2.56	1.18	1.14	1.09	1.06
558	DEL	2.44	2.48	3.06	3.14	2.85	2.88	1.25	1.27	1.17	1.16
559	ATL	1.96	1.97	2.61	2.65	2.47	2.48	1.33	1.35	1.26	1.26
561	ATL	2	2.01	2.56	2.6	2.39	2.41	1.28	1.29	1.2	1.2
562	BGH	2.21	2.23	2.86	2.92	2.68	2.7	1.3	1.31	1.22	1.21
563	BSK	2.29	2.3	2.76	2.84	2.62	2.63	1.2	1.23	1.14	1.14
564	LET	1.94	1.83	2.54	2.35	2.42	2.29	1.31	1.28	1.25	1.25
565	DEL	2.45	2.49	3.07	3.15	2.86	2.89	1.25	1.26	1.16	1.16
566	DEL	2.32	2.34	2.98	3.03	2.8	2.82	1.28	1.29	1.21	1.2
567	BSK	2.34	2.36	2.87	2.93	2.72	2.75	1.23	1.24	1.17	1.16
568	DEL	2.52	2.56	2.99	3.09	2.82	2.85	1.19	1.21	1.12	1.11
569	IRM	2.42	2.45	2.91	2.99	2.75	2.78	1.2	1.22	1.14	1.13
570	HAN	2.45	2.48	2.94	3.02	2.8	2.84	1.2	1.22	1.14	1.14
571	HAN	2.29	2.36	2.81	2.86	2.74	2.76	1.23	1.21	1.2	1.17
572	DVG	1.93	1.83	2.63	2.51	2.48	2.34	1.37	1.37	1.29	1.28
574	LET	2.33	2.35	2.84	2.88	2.73	2.77	1.22	1.23	1.17	1.18
575	WWT	2.11	2.12	2.63	2.63	2.56	2.56	1.24	1.24	1.21	1.2
576	DMH	2.29	2.31	2.81	2.84	2.72	2.75	1.23	1.23	1.19	1.19
577	BZR	1.97	1.84	2.62	2.44	2.47	2.31	1.33	1.33	1.25	1.25
578	HAN	2.2	2.24	2.75	2.77	2.7	2.72	1.25	1.24	1.23	1.22
579	LET	2.1	2.11	2.61	2.61	2.56	2.55	1.24	1.23	1.22	1.21
581	HKR	2.07	2.11	2.54	2.58	2.47	2.51	1.23	1.22	1.19	1.19

Appendix C-3b (Continued):

Poly #	Soil name	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	2.23	2.28	2.76	2.8	2.68	2.71	1.24	1.23	1.2	1.19
583	HAN	2.17	2.23	2.67	2.71	2.61	2.64	1.23	1.22	1.2	1.18
584	DMH	2.36	2.41	2.89	2.94	2.79	2.81	1.22	1.22	1.18	1.16
589	HAN	2.19	2.24	2.72	2.75	2.66	2.69	1.24	1.23	1.21	1.2
590	CHN	1.75	1.71	2.43	2.34	2.63	2.63	1.39	1.37	1.5	1.54
591	BVL	1.77	1.75	2.42	2.36	2.58	2.58	1.37	1.35	1.46	1.48
592	FMT	1.76	1.75	2.4	2.35	2.58	2.57	1.36	1.34	1.46	1.47
593	CVD	1.77	1.75	2.42	2.36	2.59	2.59	1.36	1.35	1.46	1.48
595	ATP	1.7	1.65	2.35	2.26	2.67	2.67	1.39	1.36	1.57	1.61
596	FMT	1.85	1.78	2.52	2.43	2.67	2.67	1.36	1.36	1.44	1.5
598	FMT	1.87	1.8	2.53	2.44	2.67	2.67	1.36	1.36	1.43	1.48
599	MAB	1.79	1.78	2.42	2.37	2.59	2.58	1.36	1.33	1.45	1.45
600	CVD	1.89	1.87	2.53	2.46	2.62	2.62	1.34	1.31	1.39	1.4
601	MAB	1.76	1.81	2.36	2.33	2.47	2.46	1.34	1.29	1.4	1.36
602	MAB	1.76	1.8	2.38	2.33	2.51	2.5	1.35	1.3	1.43	1.39
603	MAB	1.88	1.87	2.45	2.38	2.51	2.48	1.3	1.27	1.33	1.33
605	HDY	1.83	1.86	2.38	2.34	2.45	2.43	1.3	1.25	1.34	1.3
606	CVD	1.62	1.92	2.16	2.11	2.21	2.16	1.33	1.1	1.36	1.13
607	CVD	1.69	2	2.22	2.18	2.26	2.22	1.32	1.09	1.34	1.11
608	MCT	1.86	2	2.4	2.36	2.43	2.4	1.29	1.18	1.31	1.2
609	TIY	1.85	1.94	2.37	2.35	2.39	2.38	1.28	1.21	1.29	1.23
610	BVL	1.9	1.88	2.42	2.35	2.45	2.42	1.28	1.25	1.29	1.28
611	HUK	1.94	1.98	2.48	2.44	2.5	2.47	1.28	1.23	1.29	1.24
613	CCL	2	2.03	2.55	2.5	2.57	2.55	1.28	1.23	1.29	1.26
615	CVD	1.91	1.87	2.5	2.38	2.52	2.47	1.31	1.28	1.32	1.32
616	CHN	1.97	1.95	2.58	2.49	2.61	2.59	1.31	1.28	1.33	1.33
617	FMT	2.02	2.01	2.64	2.58	2.66	2.65	1.31	1.28	1.32	1.32
618	CHN	2	1.98	2.63	2.57	2.66	2.66	1.32	1.3	1.33	1.34
619	FMT	1.98	1.94	2.63	2.56	2.67	2.67	1.33	1.32	1.35	1.38
620	MAB	1.98	1.94	2.65	2.59	2.69	2.69	1.34	1.34	1.36	1.39
621	TTH	1.96	1.9	2.58	2.51	2.61	2.61	1.32	1.32	1.33	1.37
622	TTH	1.96	1.91	2.6	2.53	2.63	2.63	1.33	1.33	1.34	1.38
623	ZRB	1.95	1.89	2.61	2.54	2.65	2.65	1.34	1.35	1.36	1.4
624	THA	1.92	1.84	2.54	2.45	2.56	2.56	1.32	1.34	1.33	1.39
626	SIL	2	1.99	2.78	2.77	2.87	2.87	1.39	1.39	1.44	1.44
627	MAB	2	1.98	2.75	2.72	2.82	2.82	1.38	1.37	1.41	1.42
628	BVL	2.01	1.99	2.74	2.69	2.78	2.78	1.36	1.35	1.39	1.4
629	SIL	2.01	2	2.75	2.72	2.8	2.81	1.37	1.36	1.39	1.41
631	MAB	2.06	2.05	2.75	2.69	2.74	2.76	1.34	1.32	1.33	1.35
632	MAB	2.05	2.05	2.78	2.7	2.76	2.75	1.35	1.32	1.35	1.35
633	MAB	2.02	1.99	2.73	2.62	2.7	2.65	1.35	1.31	1.33	1.33
634	MAB	2.04	2.03	2.76	2.7	2.75	2.77	1.35	1.33	1.35	1.37
635	MAB	2.05	2.03	2.76	2.69	2.74	2.74	1.35	1.32	1.34	1.35
637	MSN	2.03	2	2.73	2.63	2.7	2.65	1.35	1.31	1.33	1.33
638	ZRB	2.04	2.03	2.76	2.68	2.74	2.74	1.35	1.32	1.34	1.35
639	PUR	2	1.93	2.69	2.55	2.57	2.49	1.34	1.32	1.28	1.29
641	MAB	1.99	1.95	2.66	2.54	2.65	2.6	1.34	1.3	1.33	1.33
642	MAB	1.98	1.97	2.62	2.52	2.65	2.63	1.32	1.28	1.34	1.34
643	CHN	1.91	1.84	2.54	2.38	2.54	2.47	1.33	1.29	1.33	1.34
645	DLB	2.02	1.92	2.69	2.53	2.51	2.41	1.33	1.32	1.24	1.26
648	CFD	1.82	1.77	2.31	2.21	2.36	2.29	1.27	1.24	1.3	1.29
649	BVL	2.01	1.96	2.64	2.53	2.64	2.62	1.31	1.29	1.31	1.34
650	MAB	2.02	1.98	2.62	2.53	2.62	2.59	1.3	1.28	1.3	1.31
651	RDM	2.08	2.05	2.65	2.59	2.63	2.59	1.27	1.26	1.27	1.27
653	LET	1.97	1.94	2.52	2.45	2.46	2.44	1.27	1.26	1.25	1.26
654	PUY	2.02	2.05	2.57	2.53	2.58	2.57	1.27	1.23	1.28	1.25
655	DEL	2.09	2.09	2.74	2.73	2.61	2.59	1.31	1.3	1.25	1.24

Appendix C-3b (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	1.95	1.9	2.54	2.46	2.46	2.41	1.3	1.29	1.26	1.27
657	LET	1.91	1.82	2.51	2.36	2.43	2.34	1.32	1.3	1.28	1.29
658	CMY	1.83	1.73	2.39	2.24	2.33	2.24	1.31	1.29	1.28	1.29
659	DEL	2.07	2.08	2.77	2.74	2.61	2.59	1.34	1.32	1.26	1.25
660	CVD	1.95	2.01	2.49	2.45	2.52	2.49	1.28	1.22	1.29	1.24
661	RDM	2.03	1.99	2.61	2.53	2.6	2.56	1.29	1.27	1.28	1.29
663	LET	1.9	1.82	2.49	2.35	2.43	2.35	1.31	1.29	1.28	1.29
664	RDM	1.95	1.89	2.52	2.41	2.48	2.43	1.29	1.28	1.27	1.29
666	PUR	2	1.92	2.68	2.54	2.56	2.48	1.34	1.32	1.28	1.29
667	LET	1.94	1.83	2.59	2.41	2.49	2.37	1.33	1.32	1.28	1.3
669	LOB	1.92	1.93	2.39	2.42	2.22	2.24	1.25	1.25	1.16	1.16
671	PHS	2.17	2.2	2.62	2.67	2.46	2.47	1.21	1.21	1.13	1.12
672	PED	2.25	2.3	2.68	2.71	2.51	2.51	1.19	1.18	1.12	1.09
673	MMO	2.2	2.26	2.62	2.63	2.44	2.44	1.19	1.17	1.11	1.08
675	BTN	2.03	2.05	2.45	2.45	2.31	2.3	1.21	1.2	1.14	1.12
676	CYG	2.01	2.02	2.42	2.43	2.29	2.29	1.2	1.2	1.14	1.13
677	BEN	2.19	2.25	2.61	2.62	2.44	2.43	1.19	1.16	1.11	1.08
680	PNC	1.74	1.74	2.18	2.19	2.02	2.02	1.25	1.26	1.16	1.16
681	CYG	1.98	2.01	2.43	2.44	2.26	2.26	1.22	1.21	1.14	1.12
682	BEN	1.88	1.89	2.32	2.32	2.17	2.16	1.23	1.23	1.15	1.14
683	HUB	1.93	1.92	2.33	2.32	2.22	2.2	1.21	1.21	1.15	1.15
684	CAR	1.74	1.74	2.18	2.18	2.03	2.03	1.25	1.26	1.17	1.17
686	LOB	1.83	1.85	2.29	2.31	2.13	2.14	1.25	1.25	1.16	1.16
689	CAR	1.65	1.64	2.12	2.13	1.97	1.96	1.28	1.3	1.19	1.2
690	RMY	1.93	1.94	2.36	2.37	2.22	2.21	1.22	1.22	1.15	1.14
691	HUB	1.79	1.76	2.22	2.22	2.11	2.08	1.24	1.26	1.18	1.18
692	BTN	1.89	1.87	2.31	2.31	2.19	2.17	1.22	1.23	1.16	1.16
693	RMY	1.97	1.97	2.37	2.37	2.25	2.25	1.2	1.2	1.15	1.14
694	HUB	1.99	2	2.37	2.38	2.26	2.25	1.19	1.19	1.14	1.13
695	BTN	1.99	2.01	2.35	2.36	2.26	2.25	1.18	1.17	1.13	1.12
696	BTN	2	2	2.35	2.34	2.24	2.21	1.17	1.17	1.12	1.11
698	MYW	1.86	1.84	2.23	2.19	2.13	2.08	1.19	1.19	1.14	1.13
699	HUB	1.93	1.93	2.26	2.26	2.18	2.12	1.17	1.17	1.13	1.1
702	CVL	2.21	2.22	2.52	2.54	2.35	2.36	1.14	1.15	1.06	1.06
703	HGV	1.98	1.98	2.3	2.3	2.19	2.14	1.16	1.16	1.11	1.08
705	MCO	1.81	1.81	2.11	2.11	2.1	1.96	1.17	1.17	1.16	1.09
708	MLA	1.84	1.84	2.17	2.17	2.08	2.02	1.18	1.18	1.13	1.09
709	COA	1.87	1.87	2.18	2.19	2.04	2.01	1.17	1.17	1.09	1.08
710	COA	2.03	2.03	2.35	2.36	2.19	2.19	1.16	1.17	1.08	1.08
711	COA	1.9	1.91	2.22	2.23	2.07	2.05	1.17	1.17	1.09	1.07
715	KVG	1.94	1.95	2.28	2.29	2.09	2.09	1.17	1.17	1.07	1.07

Appendix C-3c: Annual canola yield (t/ha) from canola-wheat-fallow averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	2.93	2.05	2.93	2.05	2.04	1.26	1	1	0.7	0.61
3	DON	2.93	2.17	2.93	2.17	2.14	1.43	1	1	0.73	0.66
4	HZM	2.81	2.04	2.81	2.04	2.07	1.45	1	1	0.74	0.71
5	DON	2.81	2.04	2.81	2.04	2.06	1.48	1	1	0.73	0.73
6	ESH	2.95	2.25	2.95	2.25	2.25	1.61	1	1	0.76	0.71
7	COS	2.9	2.06	2.9	2.06	2.06	1.31	1	1	0.71	0.63
9	BBN	2.72	2.01	2.72	2.01	2.09	1.4	1	1	0.77	0.69
10	BBN	2.88	2.07	2.88	2.07	2.04	1.37	1	1	0.71	0.66
11	ESH	2.92	2.14	2.92	2.14	2.07	1.46	1	1	0.71	0.68
13	HZM	2.72	1.98	2.72	1.98	2.09	1.36	1	1	0.77	0.69
14	COS	2.64	1.97	2.64	1.97	2.09	1.38	1	1	0.79	0.7
15	ABT	2.66	1.96	2.66	1.96	2.08	1.36	1	1	0.78	0.69
19	HZM	2.67	1.97	2.67	1.97	2.08	1.37	1	1	0.78	0.69
20	LAD	2.8	2.01	2.8	2.01	2.05	1.36	1	1	0.73	0.68
22	COS	2.75	1.98	2.75	1.98	2.07	1.34	1	1	0.75	0.68
27	DON	2.53	1.8	2.53	1.8	2.05	1.33	1	1	0.81	0.74
28	HZM	2.87	2.07	2.87	2.07	2.08	1.34	1	1	0.72	0.65
32	HRT	2.64	1.89	2.64	1.89	2.07	1.41	1	1	0.78	0.75
33	HRT	2.68	1.91	2.68	1.91	2.07	1.4	1	1	0.77	0.73
36	COS	2.63	1.89	2.63	1.89	2.06	1.41	1	1	0.78	0.75
47	DON	2.94	2.19	2.94	2.19	2.14	1.56	1	1	0.73	0.71
48	DON	2.9	2.11	2.9	2.11	2.08	1.46	1	1	0.72	0.69
49	TAG	2.84	2.04	2.84	2.04	2.06	1.42	1	1	0.72	0.7
51	SAD	3.03	2.11	3.03	2.11	2	1.32	1	1	0.66	0.63
52	VWW	2.82	2	2.82	2	2.04	1.37	1	1	0.72	0.69
53	TAG	2.71	1.94	2.71	1.94	2.06	1.39	1	1	0.76	0.72
54	ESH	3.12	2.17	3.12	2.17	2	1.34	1	1	0.64	0.62
56	ZBR	2.95	2.29	2.95	2.29	2.24	1.67	1	1	0.76	0.73
59	FAL	3.21	2.49	3.21	2.49	2.36	1.85	1	1	0.74	0.74
60	BBN	3.32	2.52	3.32	2.52	2.45	1.91	1	1	0.74	0.76
61	RYF	3.07	2.25	3.07	2.25	2.09	1.5	1	1	0.68	0.66
62	DVS	3.33	2.8	3.33	2.8	2.36	2.02	1	1	0.71	0.72
64	JUH	3.3	2.66	3.3	2.66	2.37	1.95	1	1	0.72	0.73
68	HRT	3.22	2.61	3.22	2.61	2.29	1.85	1	1	0.71	0.71
70	JUH	3.06	2.39	3.06	2.39	2.18	1.69	1	1	0.71	0.71
71	BBN	3.02	2.24	3.02	2.24	2.1	1.53	1	1	0.7	0.68
72	BLY	3.07	2.27	3.07	2.27	2.1	1.52	1	1	0.68	0.67
73	RYF	2.87	2.12	2.87	2.12	2.08	1.49	1	1	0.72	0.7
74	JUH	2.85	2.11	2.85	2.11	2.06	1.49	1	1	0.72	0.71
75	DIG	2.85	2.36	2.85	2.36	2.36	1.74	1	1	0.83	0.74
76	JUH	3.11	2.44	3.11	2.44	2.22	1.79	1	1	0.71	0.73
77	LAD	2.88	2.28	2.88	2.28	2.23	1.66	1	1	0.77	0.73
78	ABT	3.04	2.41	3.04	2.41	2.25	1.78	1	1	0.74	0.74
80	BWY	3.3	2.54	3.3	2.54	2.22	2.02	1	1	0.67	0.8
81	HZM	3.02	2.45	3.02	2.45	2.32	1.88	1	1	0.77	0.77
83	BUD	3.21	2.5	3.21	2.5	2.29	1.97	1	1	0.71	0.79
84	HZM	3.27	2.5	3.27	2.5	2.27	1.99	1	1	0.69	0.8
87	NPA	3.11	2.51	3.11	2.51	2.48	1.78	1	1	0.8	0.71
88	FAL	3.06	2.49	3.06	2.49	2.49	1.81	1	1	0.81	0.73
89	JUH	2.99	2.23	2.99	2.23	2.15	1.35	1	1	0.72	0.6
91	HZM	3.21	2.76	3.21	2.76	2.48	1.59	1	1	0.77	0.57
93	DON	3.12	2.48	3.12	2.48	2.52	1.8	1	1	0.81	0.73
94	HRT	2.83	2.38	2.83	2.38	2.37	1.76	1	1	0.84	0.74
97	FAL	3.33	2.6	3.33	2.6	2.41	1.94	1	1	0.72	0.75
98	HZM	3.11	2.47	3.11	2.47	2.37	1.85	1	1	0.76	0.75

Appendix C-3c (Continued):

Poly #	Soil name	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	3.38	2.69	3.38	2.69	2.44	1.94	1	1	0.72	0.72
101	FAL	3.33	2.6	3.33	2.6	2.29	2.01	1	1	0.69	0.77
102	WHW	3.39	2.57	3.39	2.57	2.25	2.05	1	1	0.66	0.8
103	ABT	3.25	2.43	3.25	2.43	2.33	1.91	1	1	0.72	0.79
104	HZM	3.28	2.47	3.28	2.47	2.35	1.92	1	1	0.72	0.78
105	CTE	3.28	2.57	3.28	2.57	2.43	1.93	1	1	0.74	0.75
107	ALC	3.06	2.45	3.06	2.45	2.39	1.78	1	1	0.78	0.73
108	HZM	3.17	2.37	3.17	2.37	2.38	1.84	1	1	0.75	0.78
109	PRV	3.15	2.42	3.15	2.42	2.4	1.86	1	1	0.76	0.77
110	CTE	3.26	2.6	3.26	2.6	2.49	1.93	1	1	0.76	0.74
112	ALC	3.24	2.45	3.24	2.45	2.41	1.88	1	1	0.74	0.77
130	DVS	2.77	2.21	2.77	2.21	2.09	1.83	1	1	0.75	0.83
132	CTE	2.27	2.05	2.27	2.05	2.29	1.63	1	1	1.01	0.79
133	BBN	3.08	2.39	3.08	2.39	2.31	1.75	1	1	0.75	0.73
135	DVS	3.13	2.4	3.13	2.4	2.35	1.79	1	1	0.75	0.75
144	BBN	2.55	1.77	2.55	1.77	2.09	1.33	1	1	0.82	0.75
170	HUB	3	1.99	3	1.99	2.04	1.32	1	1	0.68	0.67
171	HUB	2.97	2.21	2.97	2.21	2.09	1.5	1	1	0.71	0.68
172	KTH	3.43	2.4	3.43	2.4	2.18	1.67	1	1	0.64	0.7
173	CUL	3.49	2.45	3.49	2.45	2.21	1.72	1	1	0.63	0.7
176	HRT	3.34	2.36	3.34	2.36	2.08	1.29	1	1	0.62	0.55
177	HRT	3.1	2.37	3.1	2.37	2.1	1.52	1	1	0.68	0.64
178	HPE	3.01	2.2	3.01	2.2	2.06	1.32	1	1	0.68	0.6
180	KNZ	3.1	2.32	3.1	2.32	2.04	1.36	1	1	0.66	0.59
181	COS	3.23	2.43	3.23	2.43	2.01	1.34	1	1	0.62	0.55
182	ATO	2.93	2.09	2.93	2.09	2.07	1.31	1	1	0.71	0.63
185	UCS	2.95	2.11	2.95	2.11	2.08	1.31	1	1	0.7	0.62
189	CUL	3.32	2.37	3.32	2.37	2.07	1.3	1	1	0.62	0.55
192	COA	3.27	2.37	3.27	2.37	2.12	1.45	1	1	0.65	0.61
193	MLA	3.14	2.42	3.14	2.42	2.13	1.48	1	1	0.68	0.61
194	MLA	3.1	2.26	3.1	2.26	2.09	1.35	1	1	0.67	0.6
196	LNN	2.75	1.91	2.75	1.91	2.09	1.27	1	1	0.76	0.67
197	COA	2.84	2.17	2.84	2.17	2.07	1.3	1	1	0.73	0.6
198	COA	3.18	2.35	3.18	2.35	2.08	1.37	1	1	0.65	0.59
201	HRT	3.49	2.46	3.49	2.46	2.23	1.77	1	1	0.64	0.72
211	ZOR	3.29	2.51	3.29	2.51	1.97	1.31	1	1	0.6	0.52
212	ABC	3.28	2.53	3.28	2.53	1.95	1.38	1	1	0.6	0.54
215	ABC	3.18	2.47	3.18	2.47	1.97	1.33	1	1	0.62	0.54
218	KNZ	2.74	2.22	2.74	2.22	1.96	1.35	1	1	0.72	0.61
221	EGL	3.46	2.48	3.46	2.48	1.94	1.49	1	1	0.56	0.6
224	ABC	3.33	2.43	3.33	2.43	1.94	1.48	1	1	0.58	0.61
227	TNW	2.78	2.27	2.78	2.27	1.95	1.39	1	1	0.7	0.61
231	ABC	2.71	2.24	2.71	2.24	1.97	1.38	1	1	0.73	0.62
232	MLA	2.59	2.17	2.59	2.17	1.93	1.35	1	1	0.75	0.62
233	KNZ	2.76	2.24	2.76	2.24	1.93	1.37	1	1	0.7	0.61
236	ABC	3.14	2.41	3.14	2.41	1.97	1.33	1	1	0.63	0.55
240	KNZ	2.83	2.27	2.83	2.27	1.98	1.36	1	1	0.7	0.6
246	GDI	2.98	2.38	2.98	2.38	2.05	1.35	1	1	0.69	0.57
248	GDI	2.79	2.32	2.79	2.32	2.13	1.38	1	1	0.76	0.59
250	ABC	2.98	2.33	2.98	2.33	2.06	1.29	1	1	0.69	0.55
252	UCS	2.96	2.18	2.96	2.18	2.04	1.31	1	1	0.69	0.6
253	COD	2.89	2.13	2.89	2.13	2.05	1.34	1	1	0.71	0.63
254	PIB	2.79	1.99	2.79	1.99	2.08	1.3	1	1	0.75	0.65
258	POK	2.72	2.05	2.72	2.05	2.14	1.44	1	1	0.79	0.7
259	RDW	2.92	2.24	2.92	2.24	2.08	1.43	1	1	0.71	0.64
261	NIT	3.02	2.36	3.02	2.36	2.08	1.5	1	1	0.69	0.63
264	COA	3.18	2.55	3.18	2.55	2.04	1.53	1	1	0.64	0.6

Appendix C-3c (Continued):

Poly #	Soil name	BL		SN_i		SN_{φ}		SN_i/BL		SN_{φ}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	2.93	2.37	2.93	2.37	2.01	1.44	1	1	0.69	0.61
271	FLU	2.91	2.25	2.91	2.25	2.12	1.5	1	1	0.73	0.67
275	RDW	2.83	2.14	2.83	2.14	2.11	1.4	1	1	0.75	0.65
279	ABC	3.01	2.28	3.01	2.28	2.07	1.27	1	1	0.69	0.56
290	ABC	2.78	2.35	2.78	2.35	2.19	1.42	1	1	0.79	0.6
291	LCY	3.01	2.48	3.01	2.48	2.32	1.4	1	1	0.77	0.56
292	TMN	3.19	2.65	3.19	2.65	2.46	1.57	1	1	0.77	0.59
296	NIT	2.59	1.97	2.59	1.97	1.87	1.32	1	1	0.72	0.67
297	GOG	2.94	2.35	2.94	2.35	2.2	1.36	1	1	0.75	0.58
301	SDN	2.71	2.05	2.71	2.05	1.93	1.31	1	1	0.71	0.64
302	LCY	2.62	1.97	2.62	1.97	1.88	1.36	1	1	0.72	0.69
306	LCY	3.08	2.31	3.08	2.31	2.02	1.21	1	1	0.65	0.53
310	FRY	2.71	2.02	2.71	2.02	2.07	1.38	1	1	0.76	0.69
311	FRY	2.88	2.18	2.88	2.18	2.08	1.34	1	1	0.72	0.61
312	FRY	2.8	2.15	2.8	2.15	2.06	1.33	1	1	0.74	0.62
315	NTW	3.15	2.67	3.15	2.67	2.43	1.79	1	1	0.77	0.67
316	LCY	3.21	2.71	3.21	2.71	2.39	1.83	1	1	0.74	0.67
317	LCY	3.06	2.48	3.06	2.48	2.24	1.55	1	1	0.73	0.62
320	FRY	3.13	2.51	3.13	2.51	2.1	1.6	1	1	0.67	0.64
322	LCY	3.03	2.53	3.03	2.53	2.33	1.67	1	1	0.77	0.66
323	LCY	3.06	2.53	3.06	2.53	2.29	1.65	1	1	0.75	0.65
325	LCY	2.98	2.37	2.98	2.37	2.18	1.57	1	1	0.73	0.66
326	LCY	2.71	2.04	2.71	2.04	1.97	1.41	1	1	0.73	0.69
334	LCY	2.75	1.93	2.75	1.93	2.12	1.41	1	1	0.77	0.73
335	FRY	2.88	2.31	2.88	2.31	2.3	1.58	1	1	0.8	0.69
337	MGS	3.11	2.55	3.11	2.55	2.15	1.58	1	1	0.69	0.62
339	LFN	3.16	2.59	3.16	2.59	2.13	1.58	1	1	0.67	0.61
341	MGS	2.93	2.27	2.93	2.27	2.21	1.54	1	1	0.75	0.68
342	LFN	2.88	2.08	2.88	2.08	2.18	1.48	1	1	0.76	0.71
343	FRY	2.85	1.96	2.85	1.96	2.16	1.45	1	1	0.76	0.74
344	BSU	2.96	2.19	2.96	2.19	2.14	1.49	1	1	0.72	0.68
345	SDN	2.97	2.18	2.97	2.18	2.14	1.49	1	1	0.72	0.68
346	PHS	2.84	1.99	2.84	1.99	2.13	1.44	1	1	0.75	0.73
347	SDN	2.77	2.06	2.77	2.06	2.08	1.42	1	1	0.75	0.69
348	SDN	2.74	2.01	2.74	2.01	2.09	1.42	1	1	0.76	0.71
350	LFN	2.78	2.03	2.78	2.03	2.01	1.38	1	1	0.72	0.68
351	LFN	2.93	2.15	2.93	2.15	2.09	1.46	1	1	0.71	0.68
352	RDW	2.97	2.15	2.97	2.15	2.07	1.45	1	1	0.7	0.67
354	BVH	3.3	2.7	3.3	2.7	2.04	1.57	1	1	0.62	0.58
356	EOR	2.5	1.91	2.5	1.91	1.99	1.32	1	1	0.8	0.69
357	EOR	2.94	2.27	2.94	2.27	2.06	1.45	1	1	0.7	0.64
359	RED	2.86	2.04	2.86	2.04	2.08	1.37	1	1	0.73	0.67
360	EOR	2.94	2.14	2.94	2.14	2.09	1.42	1	1	0.71	0.66
362	EOR	3.13	2.17	3.13	2.17	2.06	1.4	1	1	0.66	0.64
363	EOR	3.06	2.2	3.06	2.2	2.05	1.4	1	1	0.67	0.63
364	EOR	2.32	2.05	2.32	2.05	2.1	1.36	1	1	0.9	0.67
365	HND	2.65	2.14	2.65	2.14	2	1.37	1	1	0.75	0.64
366	DCY	2.83	2.12	2.83	2.12	1.94	1.37	1	1	0.68	0.65
367	HND	2.85	2.11	2.85	2.11	1.96	1.36	1	1	0.69	0.65
370	HND	2.95	2.14	2.95	2.14	1.55	1.34	1	1	0.53	0.62
371	WWT	2.8	2.04	2.8	2.04	1.97	1.36	1	1	0.7	0.67
372	EOR	2.8	2.01	2.8	2.01	1.99	1.33	1	1	0.71	0.66
374	EOR	2.54	1.88	2.54	1.88	2	1.31	1	1	0.79	0.69
375	WWT	2.52	1.88	2.52	1.88	2.07	1.33	1	1	0.82	0.71
376	HND	2.65	1.93	2.65	1.93	2.16	1.37	1	1	0.82	0.71
378	HND	2.71	1.93	2.71	1.93	2.25	1.4	1	1	0.83	0.73
392	AGS	2.71	2.02	2.71	2.02	2.13	1.47	1	1	0.79	0.73

Appendix C-3c (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	2.71	1.95	2.71	1.95	2.26	1.6	1	1	0.83	0.82
396	AGS	2.94	2.17	2.94	2.17	2.18	1.54	1	1	0.74	0.71
401	MGS	2.54	1.87	2.54	1.87	2.22	1.52	1	1	0.87	0.81
403	CMO	2.76	1.94	2.76	1.94	2.3	1.65	1	1	0.83	0.85
404	AGS	2.7	1.89	2.7	1.89	2.31	1.66	1	1	0.86	0.88
405	CMO	2.73	1.98	2.73	1.98	2.2	1.55	1	1	0.81	0.78
408	AGS	2.83	1.99	2.83	1.99	2.23	1.58	1	1	0.79	0.79
409	AGS	2.75	2.01	2.75	2.01	2.28	1.64	1	1	0.83	0.82
410	UCS	2.88	2.08	2.88	2.08	2.24	1.59	1	1	0.78	0.76
411	COA	3.39	2.55	3.39	2.55	2.06	1.47	1	1	0.61	0.58
412	CMO	2.56	1.95	2.56	1.95	2.17	1.53	1	1	0.85	0.78
416	WKN	2.53	1.86	2.53	1.86	2.23	1.51	1	1	0.88	0.81
418	MMO	2.7	2.11	2.7	2.11	2.1	1.32	1	1	0.78	0.63
420	TBY	2.56	2.1	2.56	2.1	2.04	1.18	1	1	0.8	0.56
421	HND	3.01	2.46	3.01	2.46	1.78	1.46	1	1	0.59	0.59
422	HCH	2.92	2.32	2.92	2.32	1.8	1.36	1	1	0.62	0.58
423	LET	2.8	2.2	2.8	2.2	1.99	1.29	1	1	0.71	0.59
425	HND	3.25	2.99	3.25	2.99	1.93	1.67	1	1	0.59	0.56
426	MMO	3.05	2.28	3.05	2.28	2.16	1.5	1	1	0.71	0.66
428	HND	3	2.68	3	2.68	2.08	1.62	1	1	0.69	0.61
429	FLU	3.49	2.64	3.49	2.64	2.04	1.47	1	1	0.58	0.55
430	MCO	3	2.27	3	2.27	2.17	1.55	1	1	0.72	0.68
431	AGS	2.76	2.08	2.76	2.08	2.27	1.63	1	1	0.82	0.78
432	KVG	2.99	2.25	2.99	2.25	2.17	1.51	1	1	0.73	0.67
433	POK	3.27	2.45	3.27	2.45	2.21	1.6	1	1	0.67	0.65
435	BTN	2.6	1.95	2.6	1.95	2.12	1.28	1	1	0.82	0.66
437	POK	2.72	2.05	2.72	2.05	2.21	1.49	1	1	0.81	0.73
439	COA	2.98	2.18	2.98	2.18	2.19	1.56	1	1	0.74	0.72
440	COA	2.66	2.2	2.66	2.2	2.07	1.23	1	1	0.78	0.56
441	MMO	2.75	2.12	2.75	2.12	2.15	1.4	1	1	0.78	0.66
442	WTB	3.3	2.44	3.3	2.44	2.2	1.61	1	1	0.67	0.66
443	HND	3.14	2.75	3.14	2.75	1.89	1.56	1	1	0.6	0.57
444	MET	2.95	2.58	2.95	2.58	1.97	1.48	1	1	0.67	0.57
449	KUR	2.72	2.26	2.72	2.26	2.01	1.48	1	1	0.74	0.66
451	MET	2.61	2.17	2.61	2.17	2.31	1.68	1	1	0.88	0.78
452	LET	2.6	2.11	2.6	2.11	2.13	1.59	1	1	0.82	0.75
453	CHN	2.63	2.22	2.63	2.22	2.41	1.76	1	1	0.92	0.79
457	MAB	2.54	2.17	2.54	2.17	2.43	1.83	1	1	0.96	0.84
458	MAB	2.42	2.03	2.42	2.03	2.19	1.82	1	1	0.91	0.9
460	WDN	2.47	2.09	2.47	2.09	2.29	1.84	1	1	0.93	0.88
461	BVL	2.56	2.2	2.56	2.2	2.47	1.88	1	1	0.96	0.86
463	HND	2.65	2.28	2.65	2.28	2.64	1.83	1	1	1	0.8
466	HND	2.6	2.16	2.6	2.16	2.26	1.68	1	1	0.87	0.78
467	WWT	2.66	2.19	2.66	2.19	2.09	1.56	1	1	0.79	0.71
471	HUK	2.68	2.31	2.68	2.31	2.29	1.79	1	1	0.85	0.77
472	MAB	2.39	2.05	2.39	2.05	2.4	2.04	1	1	1	0.99
473	HND	2.63	2.29	2.63	2.29	2.4	1.95	1	1	0.91	0.85
474	MAB	2.48	2.14	2.48	2.14	2.38	2	1	1	0.96	0.93
475	BVL	2.5	2.19	2.5	2.19	2.4	2.17	1	1	0.96	0.99
476	MAB	2.45	2.14	2.45	2.14	2.61	2.24	1	1	1.07	1.04
478	CCL	2.61	2.31	2.61	2.31	2.34	2.17	1	1	0.9	0.94
480	HUK	2.81	2.56	2.81	2.56	2.34	1.7	1	1	0.83	0.66
481	YTW	2.86	2.66	2.86	2.66	2.38	1.6	1	1	0.83	0.6
484	WWT	2.97	2.65	2.97	2.65	2.08	1.68	1	1	0.7	0.63
486	YTW	2.81	2.49	2.81	2.49	2.22	1.8	1	1	0.79	0.72
487	HUK	2.31	2.02	2.31	2.02	2.38	2.11	1	1	1.03	1.04
489	HUK	2.52	2.13	2.52	2.13	2.21	1.98	1	1	0.88	0.93

Appendix C-3c (Continued):

Poly #	Soil name	BL		SN_t		SN_ψ		SN_t/BL		SN_ψ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	3.17	2.8	3.17	2.8	1.94	1.62	1	1	0.61	0.58
496	MET	2.59	2.16	2.59	2.16	2.19	1.92	1	1	0.85	0.89
499	CVD	1.61	1.43	1.61	1.43	1.85	1.73	1	1	1.15	1.21
508	AGS	2.39	1.94	2.39	1.94	2.19	1.57	1	1	0.92	0.81
509	PHS	2.58	1.98	2.58	1.98	2.19	1.44	1	1	0.85	0.73
510	AGS	2.27	1.92	2.27	1.92	2.1	1.45	1	1	0.92	0.76
512	BVH	2.34	2.03	2.34	2.03	2.08	1.5	1	1	0.89	0.74
513	AGS	2.39	1.94	2.39	1.94	2.18	1.54	1	1	0.91	0.8
514	PHS	2.52	2.18	2.52	2.18	2.11	1.54	1	1	0.83	0.7
515	BVH	2.69	2.39	2.69	2.39	2.16	1.43	1	1	0.8	0.6
516	BVH	2.65	2.24	2.65	2.24	2.16	1.61	1	1	0.82	0.72
517	FLU	2.61	2.14	2.61	2.14	2.11	1.75	1	1	0.81	0.82
518	MGS	2.81	2.24	2.81	2.24	2.21	1.6	1	1	0.79	0.71
519	NVR	2.5	1.95	2.5	1.95	2.28	1.69	1	1	0.91	0.87
520	AGS	2.6	2.04	2.6	2.04	2.23	1.6	1	1	0.86	0.79
521	POK	2.79	2.15	2.79	2.15	2.2	1.47	1	1	0.79	0.68
523	PED	2.76	2.32	2.76	2.32	2.24	1.57	1	1	0.81	0.68
524	FLU	3.33	2.5	3.33	2.5	2.29	1.56	1	1	0.69	0.62
531	GDB	2.36	2.18	2.36	2.18	2	1.33	1	1	0.85	0.61
532	HKR	2.96	2.7	2.96	2.7	1.98	1.49	1	1	0.67	0.55
533	HND	2.75	2.45	2.75	2.45	1.98	1.71	1	1	0.72	0.7
534	MET	2.58	2.46	2.58	2.46	2.05	1.77	1	1	0.79	0.72
536	HND	2.57	2.52	2.57	2.52	2.1	1.68	1	1	0.81	0.67
537	BVH	2.65	2.47	2.65	2.47	2.07	1.39	1	1	0.78	0.56
538	HND	2.75	2.62	2.75	2.62	2.21	1.69	1	1	0.8	0.65
539	PHS	2.58	2.41	2.58	2.41	2.03	1.33	1	1	0.79	0.55
540	KLM	2.55	2.43	2.55	2.43	1.97	1.25	1	1	0.77	0.52
543	EOR	2.86	2.67	2.86	2.67	2.29	1.67	1	1	0.8	0.63
545	IRM	2.84	2.59	2.84	2.59	2.28	1.58	1	1	0.8	0.61
547	DEL	2.91	2.64	2.91	2.64	2.36	1.71	1	1	0.81	0.65
548	BVH	2.73	2.46	2.73	2.46	2.25	1.53	1	1	0.82	0.62
549	FLU	2.68	2.32	2.68	2.32	2.2	1.49	1	1	0.82	0.64
551	FLU	2.6	2.37	2.6	2.37	2.27	1.62	1	1	0.87	0.68
553	ATL	3.26	2.75	3.26	2.75	2.59	1.9	1	1	0.8	0.69
554	ATL	2.89	2.71	2.89	2.71	2.3	1.87	1	1	0.8	0.69
555	CYG	2.21	2.13	2.21	2.13	2.2	1.64	1	1	0.99	0.77
558	DEL	2.91	2.78	2.91	2.78	2.23	1.93	1	1	0.77	0.69
559	ATL	2.46	2.67	2.46	2.67	2.1	1.71	1	1	0.85	0.64
561	ATL	2.55	2.44	2.55	2.44	2.21	1.67	1	1	0.87	0.68
562	BGH	2.77	2.67	2.77	2.67	2.17	1.81	1	1	0.78	0.68
563	BSK	3.39	2.84	3.39	2.84	2.63	1.97	1	1	0.78	0.69
564	LET	2.18	1.95	2.18	1.95	1.98	1.69	1	1	0.91	0.87
565	DEL	3	2.8	3	2.8	2.28	1.94	1	1	0.76	0.69
566	DEL	3.11	2.74	3.11	2.74	2.35	1.96	1	1	0.76	0.72
567	BSK	3.05	2.8	3.05	2.8	2.53	2.02	1	1	0.83	0.72
568	DEL	3.05	2.82	3.05	2.82	2.46	1.86	1	1	0.81	0.66
569	IRM	3.07	2.81	3.07	2.81	2.51	1.93	1	1	0.82	0.69
570	HAN	3	2.85	3	2.85	2.53	1.97	1	1	0.84	0.69
571	HAN	2.51	2.44	2.51	2.44	2.09	1.86	1	1	0.83	0.76
572	DVG	2.85	2.47	2.85	2.47	2.31	2.46	1	1	0.81	0.99
574	LET	2.97	2.89	2.97	2.89	2.64	2.1	1	1	0.89	0.73
575	WWT	2.82	2.57	2.82	2.57	2.75	2.2	1	1	0.98	0.86
576	DMH	2.82	2.67	2.82	2.67	2.47	1.98	1	1	0.87	0.74
577	BZR	2.84	2.45	2.84	2.45	2.31	2.2	1	1	0.81	0.9
578	HAN	2.67	2.44	2.67	2.44	2.26	1.86	1	1	0.84	0.76
579	LET	2.8	2.56	2.8	2.56	2.76	2.19	1	1	0.99	0.85
581	HKR	2.73	2.32	2.73	2.32	2.04	1.84	1	1	0.75	0.8

Appendix C-3c (Continued):

Poly #	Soil name	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	2.62	2.44	2.62	2.44	2.09	1.83	1	1	0.8	0.75
583	HAN	2.61	2.39	2.61	2.39	2.1	1.85	1	1	0.81	0.77
584	DMH	2.64	2.56	2.64	2.56	2.2	1.86	1	1	0.83	0.73
589	HAN	2.62	2.4	2.62	2.4	2.11	1.84	1	1	0.81	0.77
590	CHN	2.28	1.86	2.28	1.86	1.95	1.8	1	1	0.85	0.97
591	BVL	2.27	1.94	2.27	1.94	2.23	1.96	1	1	0.98	1.01
592	FMT	2.17	1.92	2.17	1.92	2.25	1.99	1	1	1.04	1.03
593	CVD	2.22	1.95	2.22	1.95	2.35	2.03	1	1	1.06	1.04
595	ATP	2	1.83	2	1.83	2.22	1.97	1	1	1.11	1.07
596	FMT	2.15	1.85	2.15	1.85	2.07	1.81	1	1	0.96	0.98
598	FMT	2.15	1.85	2.15	1.85	2.03	1.79	1	1	0.95	0.97
599	MAB	1.96	1.85	1.96	1.85	1.97	1.84	1	1	1.01	1
600	CVD	2.11	1.87	2.11	1.87	1.9	1.76	1	1	0.9	0.94
601	MAB	2.19	1.94	2.19	1.94	2.42	2.08	1	1	1.11	1.07
602	MAB	2.04	1.88	2.04	1.88	2.17	1.95	1	1	1.06	1.04
603	MAB	2.12	1.89	2.12	1.89	1.86	1.74	1	1	0.88	0.92
605	HDY	2.19	1.9	2.19	1.9	2.28	1.98	1	1	1.04	1.04
606	CVD	1.95	1.69	1.95	1.69	2.16	1.9	1	1	1.11	1.13
607	CVD	2.06	1.79	2.06	1.79	2.09	1.81	1	1	1.01	1.01
608	MCT	2.33	1.98	2.33	1.98	2.22	1.8	1	1	0.95	0.91
609	TIY	2.33	1.91	2.33	1.91	2.63	2.16	1	1	1.13	1.13
610	BVL	2.24	1.97	2.24	1.97	2.16	1.82	1	1	0.96	0.92
611	HUK	2.36	1.98	2.36	1.98	2.28	1.94	1	1	0.96	0.98
613	CCL	2.55	2.13	2.55	2.13	2.21	1.72	1	1	0.87	0.81
615	CVD	2.03	1.84	2.03	1.84	1.83	1.58	1	1	0.9	0.86
616	CHN	2.06	1.83	2.06	1.83	1.76	1.54	1	1	0.85	0.84
617	FMT	2.21	1.99	2.21	1.99	1.82	1.6	1	1	0.82	0.8
618	CHN	2.24	1.96	2.24	1.96	1.84	1.64	1	1	0.82	0.84
619	FMT	2.26	1.95	2.26	1.95	1.92	1.63	1	1	0.85	0.83
620	MAB	2.4	1.98	2.4	1.98	2.02	1.58	1	1	0.84	0.8
621	TTH	2.49	1.92	2.49	1.92	2.03	1.48	1	1	0.81	0.77
622	TTH	2.53	1.95	2.53	1.95	2.07	1.48	1	1	0.82	0.76
623	ZRB	2.58	1.94	2.58	1.94	2.12	1.48	1	1	0.82	0.76
624	THA	2.69	1.87	2.69	1.87	2.14	1.36	1	1	0.79	0.73
626	SIL	2.49	2.09	2.49	2.09	2.18	1.68	1	1	0.88	0.81
627	MAB	2.45	2.08	2.45	2.08	2.12	1.67	1	1	0.87	0.8
628	BVL	2.41	2.09	2.41	2.09	2.08	1.67	1	1	0.86	0.8
629	SIL	2.43	2.1	2.43	2.1	2.1	1.67	1	1	0.86	0.79
631	MAB	2.35	2.16	2.35	2.16	2	1.65	1	1	0.85	0.77
632	MAB	2.22	2.14	2.22	2.14	1.95	1.72	1	1	0.88	0.8
633	MAB	2.17	2.08	2.17	2.08	1.89	1.69	1	1	0.87	0.82
634	MAB	2.36	2.16	2.36	2.16	2.04	1.69	1	1	0.86	0.78
635	MAB	2.3	2.15	2.3	2.15	1.99	1.69	1	1	0.87	0.79
637	MSN	2.16	2.08	2.16	2.08	1.88	1.7	1	1	0.87	0.82
638	ZRB	2.27	2.14	2.27	2.14	1.98	1.7	1	1	0.87	0.79
639	PUR	2.31	2.16	2.31	2.16	1.85	1.69	1	1	0.8	0.78
641	MAB	2.08	1.92	2.08	1.92	1.85	1.61	1	1	0.89	0.84
642	MAB	1.95	1.72	1.95	1.72	1.69	1.44	1	1	0.87	0.84
643	CHN	1.99	1.79	1.99	1.79	1.92	1.6	1	1	0.96	0.89
645	DLB	2.32	2.06	2.32	2.06	1.97	1.68	1	1	0.85	0.81
648	CFD	2.12	1.93	2.12	1.93	1.9	1.67	1	1	0.9	0.86
649	BVL	2.1	2.22	2.1	2.22	1.99	1.41	1	1	0.95	0.64
650	MAB	2.24	2.12	2.24	2.12	1.99	1.6	1	1	0.89	0.75
651	RDM	2.51	2.12	2.51	2.12	2.04	1.85	1	1	0.81	0.87
653	LET	2.52	2.21	2.52	2.21	2.23	1.9	1	1	0.88	0.86
654	PUY	2.59	2.19	2.59	2.19	2.24	1.74	1	1	0.87	0.79
655	DEL	2.85	2.55	2.85	2.55	2.25	2.01	1	1	0.79	0.79

Appendix C-3c (Continued):

Poly #	Soil name	BL		SN_t		SN_ψ		SN_t/BL		SN_ψ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	2.51	2.27	2.51	2.27	2	1.87	1	1	0.8	0.82
657	LET	2.24	2.07	2.24	2.07	1.84	1.69	1	1	0.82	0.82
658	CMY	2.02	1.93	2.02	1.93	1.41	1.4	1	1	0.7	0.73
659	DEL	2.89	2.77	2.89	2.77	2.08	2.12	1	1	0.72	0.77
660	CVD	2.45	2.06	2.45	2.06	2.22	1.78	1	1	0.91	0.87
661	RDM	2.35	2.1	2.35	2.1	1.98	1.71	1	1	0.85	0.81
663	LET	2.16	2.04	2.16	2.04	1.74	1.56	1	1	0.8	0.77
664	RDM	2.33	2.11	2.33	2.11	1.96	1.72	1	1	0.84	0.82
666	PUR	2.29	2.13	2.29	2.13	1.86	1.67	1	1	0.81	0.78
667	LET	2.2	1.98	2.2	1.98	2	1.7	1	1	0.91	0.86
669	LOB	2.38	2.15	2.38	2.15	2.2	1.52	1	1	0.92	0.71
671	PHS	2.8	2.44	2.8	2.44	2.4	1.71	1	1	0.86	0.7
672	PED	2.51	2.29	2.51	2.29	2.29	1.67	1	1	0.91	0.73
673	MMO	2.25	2.1	2.25	2.1	2.18	1.55	1	1	0.97	0.74
675	BTN	2.78	2.29	2.78	2.29	2.24	1.49	1	1	0.8	0.65
676	CYG	3.18	2.47	3.18	2.47	2.29	1.56	1	1	0.72	0.63
677	BEN	2.33	2.14	2.33	2.14	2.18	1.55	1	1	0.94	0.73
680	PNC	1.99	1.69	1.99	1.69	2.01	1.16	1	1	1.01	0.69
681	CYG	2.27	2.01	2.27	2.01	2.15	1.41	1	1	0.95	0.7
682	BEN	2.26	1.94	2.26	1.94	2.12	1.29	1	1	0.94	0.66
683	HUB	2.71	2.31	2.71	2.31	2.14	1.33	1	1	0.79	0.58
684	CAR	2.03	1.74	2.03	1.74	2.05	1.14	1	1	1.01	0.65
686	LOB	2.19	1.94	2.19	1.94	2.11	1.35	1	1	0.96	0.7
689	CAR	1.97	1.69	1.97	1.69	1.97	1.17	1	1	1	0.69
690	RMY	2.49	2.12	2.49	2.12	2.18	1.36	1	1	0.87	0.64
691	HUB	2.27	2.03	2.27	2.03	2.12	1.2	1	1	0.94	0.59
692	BTN	2.48	2.14	2.48	2.14	2.2	1.28	1	1	0.88	0.6
693	RMY	3.2	2.46	3.2	2.46	2.28	1.51	1	1	0.71	0.62
694	HUB	2.81	2.26	2.81	2.26	2.16	1.39	1	1	0.77	0.62
695	BTN	2.68	2.13	2.68	2.13	2.09	1.29	1	1	0.78	0.6
696	BTN	3.15	2.57	3.15	2.57	2.14	1.51	1	1	0.68	0.59
698	MYW	3.26	2.82	3.26	2.82	2.1	1.56	1	1	0.64	0.55
699	HUB	3.4	2.72	3.4	2.72	2.27	1.67	1	1	0.67	0.61
702	CVL	3.37	2.52	3.37	2.52	2.23	1.63	1	1	0.66	0.65
703	HGV	3.48	2.66	3.48	2.66	2.33	1.72	1	1	0.67	0.64
705	MCO	4	3.02	4	3.02	2.67	2.1	1	1	0.67	0.7
708	MLA	3.45	2.68	3.45	2.68	2.3	1.68	1	1	0.67	0.63
709	COA	3.27	2.51	3.27	2.51	2.15	1.54	1	1	0.66	0.61
710	COA	3.14	2.44	3.14	2.44	2.17	1.48	1	1	0.69	0.61
711	COA	3.19	2.47	3.19	2.47	2.16	1.5	1	1	0.68	0.61
715	KVG	2.78	2.21	2.78	2.21	2.06	1.27	1	1	0.74	0.57

Appendix C-3d: Annual wheat yield (t/ha) from canola-wheat-fallow averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	3.63	3.6	4.71	4.39	4.39	4.26	1.3	1.22	1.21	1.18
3	DON	3.73	3.6	4.65	4.46	4.42	4.34	1.25	1.24	1.19	1.21
4	HZM	3.76	3.55	4.61	4.48	4.43	4.42	1.23	1.26	1.18	1.24
5	DON	3.8	3.57	4.58	4.48	4.43	4.43	1.2	1.25	1.17	1.24
6	ESH	3.81	3.59	4.61	4.5	4.45	4.43	1.21	1.26	1.17	1.23
7	COS	3.66	3.61	4.68	4.42	4.42	4.3	1.28	1.22	1.21	1.19
9	BBN	3.69	3.65	4.56	4.45	4.51	4.37	1.24	1.22	1.22	1.2
10	BBN	3.78	3.74	4.54	4.47	4.55	4.35	1.2	1.19	1.2	1.16
11	ESH	3.84	3.77	4.53	4.45	4.49	4.33	1.18	1.18	1.17	1.15
13	HZM	3.63	3.63	4.63	4.53	4.68	4.46	1.27	1.25	1.29	1.23
14	COS	3.66	3.68	4.53	4.46	4.59	4.38	1.24	1.21	1.26	1.19
15	ABT	3.62	3.68	4.58	4.51	4.67	4.42	1.26	1.23	1.29	1.2
19	HZM	3.63	3.68	4.57	4.51	4.67	4.42	1.26	1.22	1.29	1.2
20	LAD	3.73	3.72	4.6	4.53	4.67	4.43	1.23	1.22	1.25	1.19
22	COS	3.59	3.66	4.69	4.61	4.78	4.51	1.31	1.26	1.33	1.23
27	DON	3.59	3.54	4.63	4.57	4.84	4.59	1.29	1.29	1.35	1.29
28	HZM	3.67	3.62	4.66	4.44	4.45	4.32	1.27	1.23	1.21	1.19
32	HRT	3.88	3.73	4.6	4.61	4.76	4.52	1.19	1.23	1.23	1.21
33	HRT	3.85	3.72	4.61	4.59	4.75	4.51	1.2	1.23	1.23	1.21
36	COS	3.82	3.68	4.58	4.56	4.74	4.51	1.2	1.24	1.24	1.22
47	DON	3.78	3.68	4.53	4.47	4.51	4.38	1.2	1.21	1.19	1.19
48	DON	3.83	3.73	4.55	4.5	4.58	4.4	1.19	1.21	1.2	1.18
49	TAG	3.84	3.74	4.57	4.53	4.64	4.43	1.19	1.21	1.21	1.18
51	SAD	3.85	3.8	4.56	4.5	4.59	4.35	1.18	1.18	1.19	1.14
52	VVW	3.83	3.75	4.58	4.54	4.66	4.43	1.2	1.21	1.22	1.18
53	TAG	3.81	3.72	4.6	4.58	4.73	4.49	1.21	1.23	1.24	1.21
54	ESH	3.87	3.82	4.56	4.49	4.55	4.32	1.18	1.17	1.17	1.13
56	ZBR	3.71	3.59	4.47	4.4	4.38	4.3	1.21	1.23	1.18	1.2
59	FAL	3.81	3.68	4.47	4.42	4.3	4.31	1.17	1.2	1.13	1.17
60	BBN	3.82	3.68	4.43	4.41	4.26	4.3	1.16	1.2	1.12	1.17
61	RYF	3.86	3.78	4.53	4.46	4.47	4.31	1.17	1.18	1.16	1.14
62	DVS	3.77	3.63	4.46	4.35	4.13	4.21	1.18	1.2	1.09	1.16
64	JUH	3.8	3.66	4.47	4.39	4.21	4.25	1.18	1.2	1.11	1.16
68	HRT	3.8	3.68	4.48	4.39	4.25	4.25	1.18	1.19	1.12	1.16
70	JUH	3.86	3.76	4.49	4.39	4.34	4.26	1.16	1.17	1.12	1.13
71	BBN	3.87	3.78	4.52	4.44	4.45	4.3	1.17	1.17	1.15	1.14
72	BLY	3.86	3.78	4.53	4.45	4.45	4.31	1.17	1.18	1.15	1.14
73	RYF	3.86	3.75	4.53	4.44	4.47	4.34	1.17	1.18	1.16	1.16
74	JUH	3.92	3.84	4.5	4.41	4.46	4.29	1.15	1.15	1.14	1.12
75	DIG	3.9	3.73	4.55	4.49	4.46	4.48	1.17	1.21	1.14	1.2
76	JUH	3.85	3.73	4.49	4.4	4.31	4.28	1.16	1.18	1.12	1.15
77	LAD	3.9	3.77	4.52	4.45	4.44	4.39	1.16	1.18	1.14	1.16
78	ABT	3.87	3.73	4.5	4.42	4.36	4.34	1.16	1.19	1.13	1.16
80	BWY	3.82	3.61	4.52	4.45	4.29	4.36	1.18	1.23	1.12	1.21
81	HZM	3.88	3.7	4.52	4.47	4.38	4.43	1.17	1.21	1.13	1.2
83	BUD	3.84	3.63	4.53	4.46	4.33	4.4	1.18	1.23	1.13	1.21
84	HZM	3.82	3.61	4.53	4.46	4.31	4.38	1.19	1.23	1.13	1.21
87	NPA	3.84	3.62	4.62	4.53	4.47	4.44	1.2	1.25	1.16	1.23
88	FAL	3.86	3.63	4.61	4.53	4.48	4.47	1.19	1.25	1.16	1.23
89	JUH	3.68	3.62	4.69	4.45	4.4	4.28	1.28	1.23	1.2	1.18
91	HZM	3.79	3.66	4.67	4.58	4.43	4.31	1.23	1.25	1.17	1.18
93	DON	3.84	3.58	4.64	4.54	4.51	4.46	1.21	1.27	1.17	1.25
94	HRT	3.91	3.74	4.54	4.49	4.46	4.49	1.16	1.2	1.14	1.2
97	FAL	3.81	3.65	4.48	4.42	4.26	4.3	1.18	1.21	1.12	1.18
98	HZM	3.73	3.59	4.46	4.37	4.27	4.26	1.2	1.22	1.15	1.19

Appendix C-3d (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	3.79	3.63	4.55	4.46	4.27	4.3	1.2	1.23	1.13	1.19
101	FAL	3.81	3.62	4.52	4.44	4.26	4.32	1.19	1.23	1.12	1.19
102	WHW	3.81	3.59	4.53	4.45	4.28	4.34	1.19	1.24	1.12	1.21
103	ABT	3.79	3.62	4.52	4.43	4.28	4.35	1.19	1.22	1.13	1.2
104	HZM	3.8	3.63	4.53	4.43	4.28	4.33	1.19	1.22	1.13	1.2
105	CTE	3.83	3.66	4.56	4.46	4.32	4.33	1.19	1.22	1.13	1.18
107	ALC	3.8	3.63	4.54	4.46	4.36	4.37	1.2	1.23	1.15	1.2
108	HZM	3.75	3.6	4.49	4.38	4.24	4.3	1.2	1.22	1.13	1.19
109	PRV	3.76	3.61	4.48	4.38	4.27	4.29	1.19	1.21	1.14	1.19
110	CTE	3.84	3.68	4.57	4.46	4.34	4.32	1.19	1.21	1.13	1.18
112	ALC	3.81	3.65	4.54	4.43	4.3	4.33	1.19	1.21	1.13	1.19
130	DVS	3.2	3.1	3.92	3.76	3.78	3.8	1.23	1.21	1.18	1.22
132	CTE	3.19	3.17	3.9	4.04	3.97	3.9	1.22	1.27	1.25	1.23
133	BBN	3.79	3.67	4.56	4.49	4.41	4.42	1.2	1.23	1.16	1.2
135	DVS	3.79	3.67	4.5	4.46	4.37	4.37	1.19	1.21	1.15	1.19
144	BBN	3.51	3.48	4.7	4.63	4.83	4.67	1.34	1.33	1.37	1.34
170	HUB	3.52	3.39	4.94	4.66	4.61	4.44	1.4	1.37	1.31	1.31
171	HUB	3.72	3.65	4.86	4.7	4.7	4.65	1.31	1.29	1.26	1.27
172	KTH	3.99	3.88	4.99	4.76	4.72	4.62	1.25	1.23	1.18	1.19
173	CUL	4.01	3.91	5.02	4.77	4.73	4.65	1.25	1.22	1.18	1.19
176	HRT	4.21	3.91	4.84	4.7	4.63	4.36	1.15	1.2	1.1	1.11
177	HRT	4.04	3.86	4.86	4.74	4.72	4.64	1.2	1.23	1.17	1.2
178	HPE	4.28	4.11	4.83	4.72	4.71	4.68	1.13	1.15	1.1	1.14
180	KNZ	4.17	4.01	4.83	4.75	4.71	4.67	1.16	1.18	1.13	1.16
181	COS	4.14	4.01	4.85	4.83	4.74	4.7	1.17	1.2	1.14	1.17
182	ATO	4.26	4.07	4.81	4.68	4.68	4.67	1.13	1.15	1.1	1.15
185	UCS	4.28	4.06	4.81	4.67	4.67	4.61	1.12	1.15	1.09	1.13
189	CUL	4.22	3.93	4.84	4.71	4.63	4.39	1.15	1.2	1.1	1.12
192	COA	4.1	3.92	4.91	4.72	4.68	4.52	1.2	1.21	1.14	1.16
193	MLA	4.07	3.97	4.94	4.72	4.74	4.66	1.21	1.19	1.17	1.18
194	MLA	4.3	4.07	4.84	4.68	4.68	4.54	1.12	1.15	1.09	1.12
196	LNN	4.36	4.15	4.78	4.63	4.67	4.7	1.1	1.12	1.07	1.13
197	COA	4.39	4.2	4.77	4.64	4.69	4.6	1.09	1.1	1.07	1.09
198	COA	4.3	4.09	4.89	4.71	4.7	4.56	1.14	1.15	1.09	1.12
201	HRT	3.95	3.9	5.03	4.77	4.74	4.68	1.27	1.22	1.2	1.2
211	ZOR	4.15	4.04	4.84	4.83	4.72	4.67	1.17	1.2	1.14	1.16
212	ABC	4.15	4.04	4.81	4.78	4.65	4.6	1.16	1.18	1.12	1.14
215	ABC	4.16	4.05	4.79	4.76	4.69	4.65	1.15	1.18	1.13	1.15
218	KNZ	4.15	4.08	4.6	4.51	4.63	4.58	1.11	1.11	1.12	1.12
221	EGL	4.18	4.06	4.84	4.78	4.57	4.5	1.16	1.18	1.09	1.11
224	ABC	4.17	4.06	4.79	4.73	4.57	4.51	1.15	1.17	1.1	1.11
227	TNW	4.15	4.09	4.58	4.46	4.59	4.53	1.1	1.09	1.11	1.11
231	ABC	4.17	4.11	4.56	4.44	4.58	4.51	1.09	1.08	1.1	1.1
232	MLA	4.1	4.05	4.52	4.44	4.6	4.52	1.1	1.1	1.12	1.12
233	KNZ	4.12	4.05	4.59	4.52	4.6	4.52	1.11	1.12	1.12	1.12
236	ABC	4.19	4.07	4.71	4.65	4.6	4.48	1.12	1.14	1.1	1.1
240	KNZ	4.16	4.08	4.61	4.52	4.59	4.5	1.11	1.11	1.1	1.1
246	GDI	4.18	4.01	4.64	4.55	4.52	4.39	1.11	1.14	1.08	1.1
248	GDI	4.14	3.93	4.55	4.44	4.38	4.26	1.1	1.13	1.06	1.08
250	ABC	4.15	4.03	4.59	4.48	4.39	4.25	1.11	1.11	1.06	1.05
252	UCS	4.26	4.11	4.78	4.68	4.68	4.67	1.12	1.14	1.1	1.14
253	COD	4.3	4.14	4.75	4.6	4.65	4.64	1.1	1.11	1.08	1.12
254	PIB	4.35	4.17	4.75	4.59	4.65	4.66	1.09	1.1	1.07	1.12
258	POK	4.35	4.23	4.62	4.5	4.55	4.47	1.06	1.06	1.05	1.06
259	RDW	4.35	4.23	4.68	4.49	4.59	4.53	1.08	1.06	1.06	1.07
261	NIT	4.34	4.26	4.66	4.43	4.56	4.49	1.07	1.04	1.05	1.05
264	COA	4.33	4.27	4.67	4.37	4.55	4.48	1.08	1.02	1.05	1.05

Appendix C-3d (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	4.25	4.18	4.62	4.42	4.57	4.5	1.09	1.06	1.08	1.07
271	FLU	4.29	4.21	4.6	4.43	4.54	4.43	1.07	1.05	1.06	1.05
275	RDW	4.16	4.06	4.52	4.41	4.45	4.31	1.09	1.09	1.07	1.06
279	ABC	4.14	4.06	4.58	4.47	4.4	4.24	1.11	1.1	1.06	1.04
290	ABC	4.16	3.91	4.56	4.45	4.42	4.28	1.1	1.14	1.06	1.09
291	LCY	4.1	3.92	4.53	4.41	4.43	4.19	1.11	1.13	1.08	1.07
292	TMN	4.03	3.92	4.5	4.38	4.43	4.2	1.12	1.12	1.1	1.07
296	NIT	3.72	3.63	3.96	3.76	3.95	3.97	1.06	1.04	1.06	1.1
297	GOG	4	3.86	4.39	4.25	4.3	4.12	1.1	1.1	1.07	1.07
301	SDN	3.85	3.75	4.15	3.98	4.07	4.05	1.08	1.06	1.06	1.08
302	LCY	3.75	3.66	4	3.81	3.95	3.99	1.07	1.04	1.05	1.09
306	LCY	4.08	4.02	4.54	4.43	4.31	4.17	1.11	1.1	1.06	1.04
310	FRY	3.97	3.8	4.31	4.22	4.29	4.19	1.09	1.11	1.08	1.1
311	FRY	4.1	3.99	4.49	4.39	4.41	4.25	1.1	1.1	1.08	1.06
312	FRY	4.01	3.87	4.4	4.3	4.38	4.22	1.1	1.11	1.09	1.09
315	NTW	3.96	3.89	4.42	4.31	4.34	4.27	1.12	1.11	1.09	1.1
316	LCY	3.98	3.93	4.43	4.32	4.3	4.24	1.11	1.1	1.08	1.08
317	LCY	3.96	3.87	4.36	4.22	4.25	4.12	1.1	1.09	1.07	1.07
320	FRY	3.96	3.9	4.32	4.18	4.13	4.04	1.09	1.07	1.04	1.04
322	LCY	3.93	3.9	4.3	4.18	4.17	4.05	1.1	1.07	1.06	1.04
323	LCY	3.95	3.9	4.32	4.21	4.18	4.06	1.1	1.08	1.06	1.04
325	LCY	3.94	3.87	4.3	4.18	4.16	4.08	1.09	1.08	1.06	1.06
326	LCY	3.83	3.72	4.11	3.96	4.04	4.05	1.07	1.06	1.06	1.09
334	LCY	4.05	3.86	4.39	4.34	4.31	4.24	1.09	1.13	1.07	1.1
335	FRY	3.92	3.85	4.28	4.18	4.2	4.11	1.09	1.09	1.07	1.07
337	MGS	3.92	3.83	4.31	4.25	4.23	4.19	1.1	1.11	1.08	1.09
339	LFN	3.93	3.83	4.32	4.27	4.23	4.19	1.1	1.11	1.08	1.1
341	MGS	3.97	3.88	4.33	4.27	4.25	4.19	1.09	1.1	1.07	1.08
342	LFN	4.04	3.9	4.39	4.36	4.29	4.24	1.09	1.12	1.06	1.09
343	FRY	4.09	3.92	4.44	4.42	4.32	4.28	1.08	1.13	1.06	1.09
344	BSU	4.09	4	4.39	4.39	4.39	4.34	1.07	1.1	1.07	1.09
345	SDN	4.12	4.04	4.4	4.42	4.43	4.39	1.07	1.09	1.08	1.09
346	PHS	4.07	3.91	4.41	4.38	4.35	4.29	1.08	1.12	1.07	1.1
347	SDN	4	3.84	4.34	4.28	4.39	4.29	1.08	1.12	1.1	1.12
348	SDN	4	3.82	4.34	4.28	4.36	4.26	1.08	1.12	1.09	1.11
350	LFN	3.97	3.78	4.36	4.28	4.37	4.26	1.1	1.13	1.1	1.13
351	LFN	4.07	3.95	4.39	4.37	4.41	4.34	1.08	1.11	1.09	1.1
352	RDW	4.08	3.97	4.41	4.4	4.43	4.37	1.08	1.11	1.09	1.1
354	BVH	3.93	3.82	4.35	4.31	4.24	4.23	1.11	1.13	1.08	1.11
356	EOR	3.84	3.76	4.24	4.24	4.23	4.2	1.1	1.13	1.1	1.12
357	EOR	3.96	3.87	4.33	4.32	4.31	4.28	1.09	1.12	1.09	1.11
359	RED	4.03	3.95	4.37	4.4	4.44	4.4	1.08	1.11	1.1	1.11
360	EOR	4.05	3.98	4.38	4.41	4.44	4.4	1.08	1.11	1.1	1.11
362	EOR	4.05	3.91	4.44	4.38	4.42	4.38	1.1	1.12	1.09	1.12
363	EOR	4.01	3.88	4.45	4.37	4.43	4.38	1.11	1.13	1.1	1.13
364	EOR	3.9	3.84	4.47	4.39	4.48	4.39	1.15	1.14	1.15	1.14
365	HND	3.89	3.8	4.4	4.32	4.42	4.35	1.13	1.14	1.14	1.15
366	DCY	3.91	3.8	4.35	4.28	4.39	4.34	1.11	1.13	1.12	1.14
367	HND	3.93	3.82	4.36	4.3	4.4	4.35	1.11	1.13	1.12	1.14
370	HND	3.7	3.56	4.11	3.94	4.2	4.12	1.11	1.11	1.13	1.16
371	WWT	3.77	3.66	4.24	4.14	4.26	4.23	1.12	1.13	1.13	1.16
372	EOR	3.9	3.81	4.3	4.29	4.36	4.33	1.1	1.13	1.12	1.14
374	EOR	3.83	3.74	4.25	4.24	4.26	4.23	1.11	1.13	1.11	1.13
375	WWT	3.74	3.65	4.21	4.16	4.21	4.18	1.13	1.14	1.13	1.15
376	HND	3.71	3.6	4.22	4.12	4.2	4.19	1.14	1.14	1.13	1.17
378	HND	3.7	3.58	4.25	4.09	4.2	4.21	1.15	1.14	1.14	1.18
392	AGS	4.09	3.94	4.42	4.33	4.46	4.32	1.08	1.1	1.09	1.09

Appendix C-3d (Continued):

Poly #	Soil name	BL		SN_t		SN_{φ}		SN_t/BL		SN_{φ}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	4.31	4.26	4.58	4.49	4.6	4.45	1.06	1.06	1.07	1.04
396	AGS	4.34	4.26	4.63	4.53	4.53	4.43	1.07	1.06	1.04	1.04
401	MGS	4.33	4.24	4.53	4.45	4.49	4.38	1.05	1.05	1.04	1.03
403	CMO	4.31	4.26	4.61	4.52	4.63	4.46	1.07	1.06	1.07	1.05
404	AGS	4.33	4.29	4.6	4.52	4.64	4.48	1.06	1.06	1.07	1.04
405	CMO	4.18	4.08	4.5	4.42	4.54	4.38	1.08	1.08	1.09	1.07
408	AGS	4.18	4.07	4.55	4.47	4.58	4.4	1.09	1.1	1.09	1.08
409	AGS	4.28	4.18	4.67	4.56	4.65	4.5	1.09	1.09	1.09	1.08
410	UCS	4.3	4.21	4.61	4.52	4.58	4.43	1.07	1.07	1.07	1.05
411	COA	4.32	4.23	4.68	4.56	4.41	4.37	1.08	1.08	1.02	1.03
412	CMO	4.1	3.99	4.54	4.46	4.62	4.45	1.11	1.12	1.13	1.12
416	WKN	4.35	4.25	4.54	4.47	4.48	4.38	1.04	1.05	1.03	1.03
418	MMO	4.41	4.25	4.64	4.55	4.62	4.48	1.05	1.07	1.05	1.05
420	TBY	4.44	4.24	4.62	4.58	4.66	4.48	1.04	1.08	1.05	1.05
421	HND	3.66	3.54	4.23	4.09	4.3	4.27	1.16	1.16	1.18	1.21
422	HCH	3.45	3.33	4.06	3.94	4.16	4.11	1.18	1.18	1.21	1.24
423	LET	3.31	3.19	3.99	3.89	4.08	4.03	1.21	1.22	1.23	1.27
425	HND	3.43	3.32	4.21	4.09	4.33	4.38	1.23	1.23	1.26	1.32
426	MMO	4.41	4.31	4.71	4.58	4.6	4.5	1.07	1.06	1.04	1.04
428	HND	3.1	3	3.88	3.76	4.17	4.14	1.25	1.25	1.35	1.38
429	FLU	4.33	4.24	4.72	4.59	4.41	4.38	1.09	1.08	1.02	1.03
430	MCO	4.31	4.21	4.7	4.58	4.55	4.46	1.09	1.09	1.06	1.06
431	AGS	4.35	4.24	4.75	4.62	4.67	4.56	1.09	1.09	1.07	1.08
432	KVG	4.38	4.3	4.77	4.61	4.65	4.53	1.09	1.07	1.06	1.05
433	POK	4.43	4.37	4.87	4.67	4.77	4.65	1.1	1.07	1.08	1.06
435	BTN	4.41	4.32	4.74	4.55	4.63	4.47	1.08	1.05	1.05	1.04
437	POK	4.37	4.28	4.76	4.59	4.68	4.54	1.09	1.07	1.07	1.06
439	COA	4.29	4.2	4.64	4.54	4.55	4.43	1.08	1.08	1.06	1.05
440	COA	4.48	4.31	4.66	4.61	4.71	4.49	1.04	1.07	1.05	1.04
441	MMO	4.42	4.3	4.65	4.56	4.61	4.47	1.05	1.06	1.04	1.04
442	WTB	4.5	4.43	4.86	4.69	4.83	4.69	1.08	1.06	1.07	1.06
443	HND	3.62	3.51	4.3	4.18	4.37	4.38	1.19	1.19	1.21	1.25
444	MET	3.76	3.66	4.4	4.3	4.44	4.39	1.17	1.18	1.18	1.2
449	KUR	2.69	2.59	3.52	3.38	3.91	3.81	1.31	1.31	1.45	1.48
451	MET	2.39	2.26	3.31	3.13	3.93	3.85	1.38	1.38	1.64	1.7
452	LET	2.41	2.3	3.29	3.11	3.83	3.72	1.36	1.35	1.59	1.62
453	CHN	2.41	2.27	3.33	3.16	4.03	3.96	1.38	1.4	1.67	1.75
457	MAB	2.27	2.11	3.19	3.03	4.05	3.99	1.4	1.43	1.78	1.89
458	MAB	2.1	1.93	2.95	2.8	3.95	3.88	1.41	1.45	1.88	2.01
460	WDN	2.16	2	3.04	2.89	3.99	3.93	1.41	1.45	1.85	1.97
461	BVL	2.31	2.15	3.23	3.06	4.07	4.01	1.4	1.43	1.76	1.87
463	HND	2.39	2.23	3.37	3.2	4.15	4.1	1.41	1.44	1.73	1.84
466	HND	2.39	2.27	3.29	3.12	3.91	3.82	1.38	1.37	1.63	1.68
467	WWT	2.53	2.43	3.39	3.22	3.86	3.75	1.34	1.33	1.52	1.55
471	HUK	2.52	2.41	3.39	3.23	4	3.92	1.35	1.34	1.59	1.63
472	MAB	2.14	1.98	2.99	2.82	4.01	3.96	1.4	1.42	1.87	2
473	HND	2.4	2.28	3.32	3.15	4.07	4.01	1.38	1.38	1.69	1.76
474	MAB	2.23	2.09	3.12	2.95	4.03	3.97	1.4	1.41	1.8	1.9
475	BVL	2.24	2.12	3.13	2.95	4.05	4	1.4	1.39	1.8	1.89
476	MAB	2.24	2.09	3.11	2.91	4.1	4.05	1.39	1.39	1.83	1.94
478	CCL	2.35	2.25	3.26	3.08	4.07	4.03	1.39	1.37	1.73	1.79
480	HUK	2.82	2.74	3.57	3.47	4.09	3.98	1.27	1.26	1.45	1.45
481	YTW	2.93	2.87	3.64	3.55	4.11	3.98	1.24	1.24	1.4	1.38
484	WWT	3.24	3.15	4.01	3.88	4.28	4.25	1.24	1.23	1.32	1.35
486	YTW	2.94	2.85	3.74	3.6	4.19	4.13	1.27	1.27	1.43	1.45
487	HUK	2.22	2.11	3.09	2.91	3.92	3.84	1.39	1.38	1.77	1.82
489	HUK	2.59	2.46	3.44	3.27	4.07	4.01	1.33	1.33	1.57	1.63

Appendix C-3d (Continued):

Poly #	Soil name	BL		SN_i		SN_ψ		SN_i/BL		SN_ψ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	3.55	3.43	4.28	4.16	4.4	4.38	1.2	1.21	1.24	1.28
496	MET	2.78	2.62	3.61	3.44	4.19	4.13	1.3	1.31	1.51	1.58
499	CVD	1.74	1.75	2.6	2.48	3.13	2.91	1.49	1.42	1.8	1.66
508	AGS	4.15	4.07	4.62	4.53	4.63	4.51	1.11	1.11	1.12	1.11
509	PHS	4.34	4.24	4.74	4.58	4.66	4.52	1.09	1.08	1.07	1.07
510	AGS	4	3.91	4.51	4.43	4.62	4.46	1.13	1.13	1.16	1.14
512	BVH	4.03	3.98	4.54	4.47	4.55	4.46	1.13	1.12	1.13	1.12
513	AGS	4.12	4.04	4.61	4.51	4.63	4.5	1.12	1.12	1.12	1.11
514	PHS	4.07	4.02	4.58	4.53	4.65	4.51	1.13	1.12	1.14	1.12
515	BVH	4	3.96	4.62	4.59	4.73	4.49	1.16	1.16	1.18	1.14
516	BVH	4.14	4.1	4.64	4.57	4.7	4.57	1.12	1.12	1.14	1.11
517	FLU	4.21	4.17	4.59	4.51	4.65	4.58	1.09	1.08	1.1	1.1
518	MGS	4.22	4.18	4.73	4.58	4.7	4.59	1.12	1.1	1.11	1.1
519	NVR	4.28	4.19	4.7	4.59	4.71	4.6	1.1	1.1	1.1	1.1
520	AGS	4.27	4.19	4.72	4.59	4.69	4.58	1.1	1.09	1.1	1.09
521	POK	4.29	4.22	4.76	4.58	4.68	4.55	1.11	1.08	1.09	1.08
523	PED	4.16	4.12	4.79	4.69	4.8	4.66	1.15	1.14	1.15	1.13
524	FLU	4.26	4.24	4.85	4.6	4.72	4.61	1.14	1.08	1.11	1.09
531	GDB	3.84	3.78	4.48	4.41	4.48	4.35	1.17	1.17	1.17	1.15
532	HKR	3.61	3.5	4.31	4.21	4.41	4.33	1.2	1.2	1.22	1.24
533	HND	3.5	3.38	4.26	4.14	4.43	4.41	1.22	1.22	1.26	1.3
534	MET	3.59	3.45	4.27	4.16	4.44	4.42	1.19	1.21	1.23	1.28
536	HND	3.74	3.61	4.36	4.29	4.49	4.42	1.17	1.19	1.2	1.22
537	BVH	3.87	3.8	4.53	4.47	4.6	4.4	1.17	1.18	1.19	1.16
538	HND	3.82	3.74	4.4	4.38	4.53	4.44	1.15	1.17	1.19	1.19
539	PHS	3.87	3.8	4.53	4.47	4.59	4.39	1.17	1.18	1.19	1.15
540	KLM	3.8	3.72	4.5	4.42	4.52	4.32	1.18	1.19	1.19	1.16
543	EOR	3.88	3.84	4.44	4.46	4.59	4.47	1.14	1.16	1.18	1.16
545	IRM	3.95	3.91	4.55	4.55	4.68	4.5	1.15	1.16	1.18	1.15
547	DEL	3.97	3.93	4.56	4.58	4.7	4.56	1.15	1.17	1.18	1.16
548	BVH	4.01	3.96	4.66	4.65	4.77	4.56	1.16	1.17	1.19	1.15
549	FLU	4.09	4.04	4.7	4.64	4.77	4.57	1.15	1.15	1.17	1.13
551	FLU	4.07	4.01	4.74	4.75	4.84	4.66	1.16	1.18	1.19	1.16
553	ATL	4.11	4.06	4.79	4.79	4.82	4.65	1.17	1.18	1.17	1.15
554	ATL	3.95	3.93	4.98	4.99	5.02	4.93	1.26	1.27	1.27	1.26
555	CYG	4.19	4.09	4.82	4.87	4.93	4.77	1.15	1.19	1.18	1.17
558	DEL	4.04	4	5.08	5.05	5.07	5.03	1.26	1.26	1.26	1.26
559	ATL	3.28	3.33	4.98	5.1	4.99	4.92	1.52	1.53	1.52	1.48
561	ATL	3.52	3.53	4.85	4.94	5.01	4.9	1.38	1.4	1.42	1.39
562	BGH	3.65	3.62	4.99	5.02	5.01	4.96	1.37	1.38	1.37	1.37
563	BSK	4.09	4.04	4.87	4.87	4.87	4.71	1.19	1.21	1.19	1.17
564	LET	2.9	2.8	4.12	3.95	4.43	4.34	1.42	1.41	1.52	1.55
565	DEL	4.07	4.03	5.05	5.02	5.05	5	1.24	1.25	1.24	1.24
566	DEL	3.81	3.71	4.9	4.85	4.93	4.91	1.29	1.31	1.3	1.32
567	BSK	3.92	3.86	4.71	4.71	4.73	4.69	1.2	1.22	1.21	1.21
568	DEL	3.9	3.87	4.45	4.5	4.6	4.53	1.14	1.16	1.18	1.17
569	IRM	3.94	3.9	4.59	4.62	4.67	4.59	1.17	1.19	1.19	1.18
570	HAN	3.85	3.81	4.4	4.44	4.48	4.47	1.14	1.17	1.16	1.17
571	HAN	3.54	3.38	4.18	4.08	4.39	4.38	1.18	1.21	1.24	1.3
572	DVG	3.19	3.09	5.14	5.05	5.16	5.18	1.61	1.63	1.62	1.68
574	LET	3.83	3.79	4.43	4.47	4.39	4.44	1.16	1.18	1.15	1.17
575	WWT	3.55	3.45	4.3	4.25	4.42	4.47	1.21	1.23	1.25	1.29
576	DMH	3.6	3.51	4.2	4.19	4.33	4.33	1.17	1.19	1.2	1.24
577	BZR	3.25	3.14	4.96	4.81	4.93	4.96	1.52	1.53	1.52	1.58
578	HAN	3.33	3.2	4	3.92	4.26	4.22	1.2	1.22	1.28	1.32
579	LET	3.52	3.42	4.22	4.17	4.34	4.39	1.2	1.22	1.23	1.28
581	HKR	3.17	3.04	3.97	3.82	4.3	4.29	1.25	1.26	1.36	1.41

Appendix C-3d (Continued):

Poly #	Soil name	BL		SN_i		SN_{φ}		SN_i/BL		SN_{φ}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	3.35	3.2	4.02	3.92	4.3	4.25	1.2	1.23	1.28	1.33
583	HAN	3.25	3.11	3.96	3.85	4.27	4.23	1.22	1.24	1.31	1.36
584	DMH	3.64	3.51	4.23	4.18	4.42	4.39	1.16	1.19	1.21	1.25
589	HAN	3.22	3.08	3.91	3.81	4.24	4.17	1.21	1.24	1.32	1.35
590	CHN	1.89	1.71	2.67	2.54	3.85	3.78	1.41	1.49	2.04	2.21
591	BVL	2.04	1.87	2.84	2.68	3.93	3.88	1.39	1.43	1.93	2.07
592	FMT	2.09	1.94	2.86	2.69	3.92	3.89	1.37	1.39	1.88	2.01
593	CVD	2.09	1.93	2.87	2.7	3.96	3.93	1.37	1.4	1.9	2.04
595	ATP	1.91	1.76	2.52	2.43	3.81	3.82	1.32	1.38	1.99	2.18
596	FMT	2.27	2.15	3.1	2.94	3.93	3.95	1.37	1.37	1.73	1.84
598	FMT	2.3	2.19	3.15	2.98	3.94	3.95	1.37	1.36	1.71	1.81
599	MAB	2.19	2.06	2.93	2.74	3.87	3.88	1.34	1.33	1.77	1.89
600	CVD	2.27	2.15	3.12	2.92	3.86	3.87	1.38	1.36	1.71	1.8
601	MAB	2.18	2.04	3.01	2.81	3.94	3.89	1.38	1.38	1.81	1.9
602	MAB	2.19	2.06	2.96	2.77	3.9	3.87	1.36	1.35	1.78	1.88
603	MAB	2.32	2.19	3.16	2.93	3.82	3.78	1.36	1.34	1.65	1.72
605	HDY	2.31	2.19	3.16	2.95	3.91	3.86	1.37	1.35	1.7	1.77
606	CVD	2.05	2	2.92	2.76	3.55	3.41	1.43	1.38	1.74	1.71
607	CVD	2.3	2.23	3.13	2.98	3.65	3.53	1.36	1.33	1.59	1.58
608	MCT	2.66	2.54	3.46	3.3	3.97	3.9	1.3	1.3	1.49	1.54
609	TIY	2.36	2.27	3.29	3.1	3.99	3.92	1.39	1.37	1.69	1.73
610	BVL	2.46	2.3	3.31	3.07	3.98	3.9	1.35	1.33	1.62	1.69
611	HUK	2.52	2.39	3.39	3.2	4.07	4	1.34	1.34	1.61	1.67
613	CCL	2.97	2.8	3.75	3.57	4.21	4.17	1.26	1.27	1.42	1.49
615	CVD	2.4	2.25	3.33	3.08	3.99	3.88	1.38	1.37	1.66	1.72
616	CHN	2.43	2.3	3.33	3.1	3.98	3.89	1.37	1.35	1.64	1.69
617	FMT	2.45	2.31	3.4	3.18	3.98	3.92	1.39	1.38	1.63	1.7
618	CHN	2.42	2.3	3.38	3.16	3.95	3.93	1.39	1.37	1.63	1.7
619	FMT	2.48	2.36	3.45	3.25	4.02	4	1.39	1.37	1.62	1.69
620	MAB	2.59	2.51	3.65	3.46	4.14	4.11	1.41	1.38	1.6	1.64
621	TTH	2.7	2.66	3.82	3.6	4.23	4.21	1.41	1.35	1.57	1.58
622	TTH	2.73	2.7	3.87	3.66	4.26	4.24	1.42	1.36	1.56	1.57
623	ZRB	2.74	2.73	3.92	3.71	4.29	4.27	1.43	1.36	1.57	1.57
624	THA	2.88	2.91	4.14	3.9	4.4	4.39	1.44	1.34	1.53	1.51
626	SIL	2.46	2.4	3.59	3.48	4.14	4.08	1.46	1.45	1.68	1.7
627	MAB	2.51	2.45	3.62	3.48	4.14	4.1	1.44	1.42	1.65	1.67
628	BVL	2.58	2.5	3.66	3.5	4.15	4.11	1.42	1.4	1.61	1.64
629	SIL	2.57	2.49	3.65	3.5	4.15	4.11	1.42	1.4	1.62	1.65
631	MAB	2.71	2.59	3.71	3.51	4.15	4.11	1.37	1.35	1.53	1.59
632	MAB	2.74	2.64	3.78	3.56	4.28	4.22	1.38	1.35	1.56	1.6
633	MAB	2.67	2.55	3.79	3.59	4.31	4.24	1.42	1.41	1.61	1.66
634	MAB	2.72	2.62	3.75	3.56	4.18	4.14	1.38	1.36	1.54	1.58
635	MAB	2.73	2.63	3.77	3.57	4.22	4.17	1.38	1.36	1.54	1.59
637	MSN	2.68	2.57	3.82	3.62	4.34	4.26	1.42	1.41	1.62	1.66
638	ZRB	2.72	2.62	3.76	3.56	4.23	4.18	1.38	1.36	1.55	1.6
639	PUR	2.71	2.57	4.11	3.97	4.45	4.4	1.52	1.54	1.64	1.71
641	MAB	2.53	2.4	3.6	3.38	4.19	4.1	1.42	1.41	1.65	1.7
642	MAB	2.43	2.31	3.37	3.14	4.06	3.94	1.38	1.36	1.67	1.7
643	CHN	2.35	2.19	3.38	3.15	4.04	3.94	1.44	1.43	1.72	1.8
645	DLB	2.91	2.76	4.4	4.27	4.64	4.55	1.52	1.55	1.6	1.65
648	CFD	2.41	2.24	3.22	2.95	3.84	3.73	1.34	1.32	1.6	1.67
649	BVL	2.65	2.39	3.48	3.16	4.12	4.02	1.32	1.32	1.56	1.69
650	MAB	2.61	2.4	3.45	3.19	4.14	4.05	1.32	1.33	1.59	1.69
651	RDM	2.76	2.61	3.66	3.5	4.29	4.24	1.32	1.34	1.56	1.62
653	LET	2.99	2.86	3.99	3.88	4.32	4.3	1.34	1.36	1.45	1.5
654	PUY	3.07	2.91	3.84	3.68	4.24	4.21	1.25	1.27	1.38	1.45
655	DEL	3.4	3.28	4.69	4.63	4.81	4.82	1.38	1.41	1.42	1.47

Appendix C-3d (Continued):

Poly #	Soil name	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	2.95	2.84	4.22	4.13	4.48	4.44	1.43	1.46	1.52	1.57
657	LET	2.73	2.61	3.98	3.84	4.35	4.25	1.46	1.47	1.59	1.63
658	CMY	2.49	2.39	3.64	3.59	4.06	3.89	1.46	1.51	1.63	1.63
659	DEL	3.42	3.29	5.03	4.98	5.07	5.1	1.47	1.52	1.48	1.55
660	CVD	2.79	2.64	3.59	3.41	4.12	4.06	1.29	1.29	1.48	1.54
661	RDM	2.67	2.5	3.57	3.37	4.22	4.14	1.34	1.35	1.58	1.66
663	LET	2.64	2.5	3.75	3.62	4.19	4.08	1.42	1.45	1.59	1.63
664	RDM	2.73	2.58	3.76	3.61	4.23	4.16	1.38	1.4	1.55	1.61
666	PUR	2.71	2.58	4.11	3.96	4.45	4.38	1.51	1.54	1.64	1.7
667	LET	2.63	2.47	3.97	3.8	4.37	4.29	1.51	1.54	1.66	1.74
669	LOB	3.6	3.61	4.76	4.83	5.03	4.87	1.32	1.34	1.4	1.35
671	PHS	3.98	3.94	4.81	4.83	4.91	4.74	1.21	1.23	1.23	1.2
672	PED	4.06	4	4.81	4.84	4.92	4.75	1.18	1.21	1.21	1.19
673	MMO	4.05	3.99	4.82	4.84	4.95	4.79	1.19	1.21	1.22	1.2
675	BTN	4.1	4.09	4.86	4.72	4.82	4.71	1.18	1.16	1.18	1.15
676	CYG	4.19	4.17	4.86	4.65	4.78	4.67	1.16	1.12	1.14	1.12
677	BEN	4.09	4.03	4.82	4.82	4.92	4.76	1.18	1.2	1.2	1.18
680	PNC	3.61	3.65	4.78	4.7	5.11	4.89	1.32	1.29	1.41	1.34
681	CYG	3.84	3.83	4.8	4.77	5	4.82	1.25	1.25	1.3	1.26
682	BEN	3.85	3.86	4.84	4.75	4.95	4.8	1.26	1.23	1.29	1.24
683	HUB	4.09	4.1	4.94	4.78	4.77	4.7	1.21	1.17	1.17	1.15
684	CAR	3.7	3.75	4.84	4.72	5.01	4.85	1.31	1.26	1.36	1.29
686	LOB	3.6	3.62	4.77	4.78	5.08	4.89	1.33	1.32	1.41	1.35
689	CAR	3.53	3.54	4.94	4.82	4.99	4.89	1.4	1.36	1.42	1.38
690	RMY	3.96	3.97	4.88	4.76	4.85	4.75	1.23	1.2	1.23	1.2
691	HUB	3.82	3.89	4.99	4.85	4.81	4.79	1.31	1.24	1.26	1.23
692	BTN	3.99	4.05	4.96	4.79	4.75	4.73	1.24	1.18	1.19	1.17
693	RMY	4.2	4.19	4.89	4.65	4.76	4.66	1.17	1.11	1.13	1.11
694	HUB	4.19	4.17	4.88	4.69	4.76	4.65	1.16	1.13	1.14	1.12
695	BTN	4.31	4.23	4.81	4.63	4.69	4.55	1.12	1.09	1.09	1.07
696	BTN	4.26	4.22	4.95	4.76	4.84	4.72	1.16	1.13	1.13	1.12
698	MYW	4.09	4.07	5.05	4.88	4.94	4.84	1.23	1.2	1.21	1.19
699	HUB	4.29	4.26	5	4.75	4.88	4.75	1.17	1.12	1.14	1.12
702	CVL	4.47	4.41	4.92	4.71	4.86	4.73	1.1	1.07	1.09	1.07
703	HGV	4.4	4.34	4.97	4.7	4.86	4.72	1.13	1.08	1.11	1.09
705	MCO	4.44	4.43	5.11	4.68	4.96	4.77	1.15	1.06	1.12	1.08
708	MLA	4.27	4.21	5.01	4.71	4.86	4.74	1.17	1.12	1.14	1.13
709	COA	4.38	4.25	5.01	4.73	4.8	4.75	1.14	1.11	1.1	1.12
710	COA	4.42	4.31	4.86	4.68	4.78	4.64	1.1	1.09	1.08	1.08
711	COA	4.42	4.28	4.94	4.7	4.79	4.69	1.12	1.1	1.08	1.09
715	KVG	4.42	4.23	4.74	4.64	4.7	4.55	1.07	1.1	1.06	1.07

Appendix C-3e: Annual wheat yield (t/ha) from winter wheat-fallow averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	2.05	2.05	2.99	2.68	3.19	1.93	1.46	1.31	1.55	0.94
3	DON	2.18	2.16	3.01	2.62	2.91	2.31	1.38	1.21	1.33	1.07
4	HZM	2.15	2.15	3.24	2.64	2.87	2.6	1.5	1.23	1.33	1.21
5	DON	2.19	2.2	3.28	2.65	2.83	2.73	1.5	1.2	1.29	1.24
6	ESH	2.24	2.23	3.06	2.61	2.72	2.58	1.36	1.17	1.21	1.15
7	COS	2.12	2.11	3.01	2.65	3.1	2.1	1.42	1.26	1.46	0.99
9	BBN	2.3	2.3	2.98	2.59	2.82	2.48	1.3	1.12	1.23	1.07
10	BBN	2.41	2.42	2.89	2.59	2.86	2.75	1.2	1.07	1.19	1.14
11	ESH	2.42	2.45	3.04	2.61	2.8	2.7	1.25	1.06	1.16	1.1
13	HZM	2.34	2.37	2.97	2.57	2.92	2.45	1.27	1.09	1.25	1.04
14	COS	2.39	2.4	2.86	2.55	2.76	2.49	1.19	1.06	1.15	1.04
15	ABT	2.42	2.45	2.85	2.54	2.76	2.49	1.18	1.04	1.14	1.02
19	HZM	2.43	2.46	2.83	2.54	2.74	2.5	1.16	1.03	1.13	1.02
20	LAD	2.44	2.47	2.84	2.58	2.81	2.61	1.17	1.04	1.15	1.06
22	COS	2.44	2.51	2.82	2.54	2.74	2.48	1.16	1.01	1.12	0.99
27	DON	2.19	2.24	3.08	2.68	3.07	2.28	1.41	1.19	1.4	1.02
28	HZM	2.17	2.16	3.01	2.63	3.03	2.19	1.39	1.22	1.4	1.01
32	HRT	2.51	2.53	2.78	2.61	2.69	2.48	1.11	1.03	1.07	0.98
33	HRT	2.5	2.51	2.8	2.6	2.72	2.51	1.12	1.04	1.09	1
36	COS	2.4	2.42	2.87	2.65	2.76	2.46	1.19	1.1	1.15	1.01
47	DON	2.38	2.36	3.12	2.73	2.95	2.78	1.31	1.16	1.24	1.18
48	DON	2.39	2.41	2.99	2.65	2.85	2.68	1.25	1.1	1.19	1.11
49	TAG	2.43	2.44	2.91	2.63	2.84	2.65	1.2	1.08	1.17	1.09
51	SAD	2.46	2.47	2.82	2.61	2.97	2.88	1.14	1.06	1.21	1.16
52	VVW	2.45	2.47	2.85	2.61	2.84	2.65	1.16	1.06	1.16	1.07
53	TAG	2.46	2.49	2.83	2.6	2.76	2.52	1.15	1.05	1.12	1.01
54	ESH	2.46	2.47	2.83	2.61	2.98	2.94	1.15	1.06	1.21	1.19
56	ZBR	2.38	2.36	2.96	2.67	2.83	2.68	1.25	1.13	1.19	1.13
59	FAL	2.36	2.34	3.36	2.87	2.93	3.06	1.43	1.22	1.24	1.31
60	BBN	2.39	2.4	3.37	2.95	2.92	3.32	1.41	1.23	1.22	1.38
61	RYF	2.41	2.43	3.05	2.63	2.86	2.81	1.26	1.08	1.19	1.15
62	DVS	2.11	2.12	3.75	2.67	2.65	2.55	1.78	1.26	1.26	1.2
64	JUH	2.25	2.26	3.53	2.76	2.78	2.81	1.57	1.22	1.24	1.24
68	HRT	2.21	2.22	3.55	2.67	2.7	2.65	1.61	1.2	1.23	1.19
70	JUH	2.34	2.38	3.38	2.64	2.72	2.63	1.44	1.11	1.16	1.1
71	BBN	2.41	2.44	3.13	2.63	2.81	2.74	1.3	1.08	1.17	1.12
72	BLY	2.4	2.42	3.09	2.63	2.85	2.78	1.29	1.09	1.19	1.15
73	RYF	2.4	2.44	3.14	2.62	2.77	2.66	1.31	1.08	1.16	1.09
74	JUH	2.49	2.56	3.2	2.62	2.73	2.62	1.28	1.02	1.1	1.03
75	DIG	2.33	2.34	3.3	2.74	2.79	2.67	1.42	1.17	1.2	1.14
76	JUH	2.35	2.39	3.31	2.69	2.74	2.61	1.41	1.12	1.16	1.09
77	LAD	2.4	2.43	3.27	2.7	2.78	2.65	1.37	1.11	1.16	1.09
78	ABT	2.36	2.39	3.29	2.71	2.77	2.65	1.4	1.14	1.18	1.11
80	BWY	2.37	2.38	2.83	2.78	2.81	2.48	1.2	1.17	1.19	1.04
81	HZM	2.36	2.37	3.19	2.79	2.84	2.65	1.35	1.18	1.2	1.12
83	BUD	2.4	2.41	2.86	2.8	2.86	2.58	1.19	1.16	1.19	1.07
84	HZM	2.42	2.42	2.76	2.79	2.86	2.55	1.14	1.15	1.18	1.05
87	NPA	2.34	2.32	2.79	2.58	2.6	2.49	1.19	1.11	1.11	1.07
88	FAL	2.33	2.32	2.88	2.62	2.63	2.52	1.24	1.13	1.13	1.09
89	JUH	2.18	2.14	2.88	2.61	2.98	2.08	1.32	1.22	1.37	0.97
91	HZM	2.48	2.35	2.51	2.41	2.44	2.35	1.01	1.03	0.99	1
93	DON	2.3	2.29	2.71	2.54	2.54	2.44	1.18	1.11	1.1	1.07
94	HRT	2.33	2.34	3.36	2.77	2.82	2.69	1.44	1.18	1.21	1.15
97	FAL	2.44	2.46	3.26	2.92	3.02	3.16	1.34	1.18	1.24	1.28
98	HZM	2.55	2.53	2.93	2.86	3.06	3.1	1.15	1.13	1.2	1.22

Appendix C-3e (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	2.68	2.74	3.1	3.03	3.44	3.47	1.16	1.11	1.28	1.27
101	FAL	2.41	2.43	2.99	2.82	2.92	2.71	1.24	1.16	1.21	1.12
102	WHW	2.47	2.49	2.7	2.85	2.96	2.66	1.09	1.14	1.2	1.07
103	ABT	2.47	2.47	2.76	2.78	2.93	2.69	1.12	1.12	1.19	1.09
104	HZM	2.52	2.53	2.79	2.82	2.98	2.82	1.11	1.11	1.19	1.11
105	CTE	2.65	2.67	2.94	2.95	3.12	3.19	1.11	1.1	1.18	1.19
107	ALC	2.4	2.38	2.92	2.69	2.78	2.63	1.22	1.13	1.16	1.11
108	HZM	2.5	2.5	2.75	2.75	2.94	2.79	1.1	1.1	1.17	1.12
109	PRV	2.54	2.54	2.82	2.8	2.93	2.9	1.11	1.1	1.15	1.15
110	CTE	2.73	2.75	3.01	3.01	3.16	3.39	1.1	1.09	1.16	1.23
112	ALC	2.59	2.59	2.82	2.84	3	2.97	1.09	1.1	1.16	1.14
130	DVS	1.93	1.89	2.16	2.15	2.17	2.04	1.12	1.14	1.12	1.08
132	CTE	2.26	1.96	2.22	2.19	2.21	2.04	0.98	1.12	0.98	1.04
133	BBN	2.51	2.41	3.13	2.97	3.3	3.24	1.25	1.24	1.32	1.35
135	DVS	2.45	2.38	3.22	2.95	3.14	3.21	1.31	1.24	1.28	1.35
144	BBN	2.7	2.11	3.53	2.88	4.22	3.34	1.31	1.37	1.56	1.59
170	HUB	2.84	2.18	3.76	2.84	4.13	3.44	1.32	1.3	1.45	1.58
171	HUB	2.45	2.13	3.66	2.61	4.02	3.53	1.5	1.23	1.64	1.66
172	KTH	2.23	2.06	3.51	2.82	4.14	3.16	1.58	1.37	1.86	1.54
173	CUL	2.19	2.05	3.45	2.89	4.14	3.14	1.58	1.41	1.89	1.54
176	HRT	2.07	2.03	3.97	1.95	4.07	2.73	1.92	0.96	1.96	1.34
177	HRT	2.22	2.12	3.74	2.27	3.8	3.19	1.68	1.07	1.71	1.5
178	HPE	2.23	2.2	3.64	2.2	3.85	2.95	1.63	1	1.73	1.34
180	KNZ	2.2	2.13	3.81	2.26	3.77	3.17	1.74	1.06	1.72	1.49
181	COS	2.14	2.07	3.84	2.32	3.65	3.34	1.8	1.12	1.71	1.61
182	ATO	2.3	2.27	3.77	2.21	3.98	3.01	1.64	0.97	1.73	1.33
185	UCS	2.26	2.24	3.72	2.15	3.99	2.85	1.65	0.96	1.76	1.27
189	CUL	2.07	2.04	3.96	1.97	4.02	2.76	1.91	0.96	1.94	1.35
192	COA	2.15	2.06	3.67	2.31	4.03	2.86	1.71	1.12	1.88	1.39
193	MLA	2.15	2.08	3.49	2.34	3.87	2.79	1.62	1.13	1.8	1.34
194	MLA	2.16	2.15	3.61	2.07	3.9	2.66	1.67	0.96	1.81	1.24
196	LNN	2.39	2.39	3.63	2.17	4.05	2.85	1.52	0.91	1.7	1.2
197	COA	2.18	2.18	3.21	2.04	3.65	2.4	1.47	0.93	1.67	1.1
198	COA	2.1	2.08	3.46	2.03	3.96	2.5	1.64	0.97	1.88	1.2
201	HRT	2.18	2.05	3.44	3.02	4.14	3.23	1.58	1.47	1.9	1.58
211	ZOR	2.11	2.02	4.09	2.42	3.58	3.35	1.94	1.2	1.69	1.66
212	ABC	2.13	2	4.47	2.61	3.63	3.25	2.1	1.3	1.7	1.62
215	ABC	2.12	2.02	4.26	2.39	3.52	3.25	2.01	1.18	1.66	1.61
218	KNZ	2.02	2	4.42	2.24	3.34	2.84	2.18	1.12	1.65	1.42
221	EGL	2.02	2	4.53	3.16	3.98	3.11	2.24	1.59	1.97	1.56
224	ABC	2.01	1.99	4.58	2.97	3.86	3.06	2.28	1.49	1.92	1.54
227	TNW	1.98	1.97	4.64	2.4	3.38	2.8	2.34	1.22	1.7	1.42
231	ABC	2.04	2.03	4.55	2.39	3.34	2.8	2.23	1.18	1.64	1.38
232	MLA	1.95	1.94	4.54	2.38	3.12	2.69	2.33	1.23	1.61	1.39
233	KNZ	1.97	1.95	4.5	2.53	3.28	2.79	2.29	1.3	1.67	1.43
236	ABC	2.03	2.02	3.96	3.34	3.61	2.85	1.95	1.65	1.78	1.41
240	KNZ	2.03	2.02	4.37	2.65	3.4	2.83	2.15	1.31	1.67	1.4
246	GDI	2.06	2.05	3.93	2.98	3.82	3.01	1.91	1.45	1.86	1.47
248	GDI	2.07	2.07	4.05	2.43	4.01	3.23	1.96	1.17	1.94	1.56
250	ABC	2.15	2.15	3.85	2.91	3.44	3.13	1.8	1.35	1.6	1.46
252	UCS	2.23	2.21	3.92	2.25	3.84	3.06	1.76	1.02	1.72	1.39
253	COD	2.27	2.26	4.03	2.27	3.91	2.97	1.78	1	1.73	1.31
254	PIB	2.36	2.36	3.75	2.21	3.97	2.85	1.59	0.94	1.68	1.21
258	POK	2.5	2.5	3.6	2.42	3.59	2.73	1.44	0.97	1.43	1.09
259	RDW	2.31	2.31	4.08	2.35	3.81	2.83	1.77	1.02	1.65	1.22
261	NIT	2.27	2.27	4.44	2.45	3.88	2.91	1.95	1.08	1.71	1.28
264	COA	2.12	2.12	4.96	2.49	4.01	3.01	2.34	1.17	1.89	1.42

Appendix C-3e (Continued):

Poly #	Soil name	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	2.09	2.09	4.68	2.46	3.65	2.91	2.24	1.18	1.75	1.39
271	FLU	2.5	2.5	4.11	2.67	3.62	2.97	1.64	1.07	1.45	1.19
275	RDW	2.58	2.58	3.65	2.92	3.25	3.04	1.42	1.13	1.26	1.18
279	ABC	2.33	2.34	3.63	3.1	3.1	3.09	1.55	1.32	1.33	1.32
290	ABC	2.04	2.04	4.17	2.33	4.23	3.2	2.04	1.14	2.07	1.57
291	LCY	2.05	2.05	4.17	2.58	3.91	2.91	2.04	1.26	1.91	1.42
292	TMN	2.06	2.07	4.42	2.83	3.82	2.7	2.14	1.37	1.85	1.31
296	NIT	2.01	2.01	3.7	2.21	3.46	2.95	1.84	1.1	1.72	1.47
297	GOG	2.08	2.08	4.01	2.58	3.68	2.92	1.93	1.24	1.77	1.4
301	SDN	2.11	2.12	3.71	2.47	3.37	3.01	1.76	1.16	1.6	1.42
302	LCY	2.1	2.11	3.86	2.32	3.42	2.96	1.84	1.1	1.63	1.4
306	LCY	2.19	2.2	3.65	3.14	3.04	3.1	1.67	1.43	1.39	1.41
310	FRY	2.57	2.6	3.66	2.73	3.12	2.94	1.42	1.05	1.21	1.13
311	FRY	2.55	2.55	3.5	3.02	3.09	3.05	1.37	1.19	1.21	1.19
312	FRY	2.57	2.57	3.43	2.95	3.04	3.01	1.33	1.15	1.19	1.17
315	NTW	2.1	2.11	4.72	3	3.86	2.74	2.24	1.43	1.83	1.3
316	LCY	2.13	2.13	5.03	3.15	3.89	2.77	2.37	1.48	1.83	1.3
317	LCY	2.09	2.1	4.51	2.81	3.74	2.83	2.15	1.34	1.79	1.35
320	FRY	2.11	2.11	5.05	3.04	3.74	2.9	2.39	1.44	1.78	1.37
322	LCY	2.16	2.16	4.94	2.54	4.33	3.11	2.29	1.18	2.01	1.44
323	LCY	2.19	2.2	4.94	2.67	4.17	3.05	2.26	1.22	1.9	1.39
325	LCY	2.23	2.25	4.64	2.67	3.83	2.99	2.08	1.19	1.72	1.33
326	LCY	2.2	2.22	4.01	2.43	3.45	2.96	1.82	1.09	1.57	1.33
334	LCY	2.68	2.73	3.84	2.74	3.06	2.91	1.44	1	1.14	1.07
335	FRY	2.3	2.32	4.41	2.36	4.04	3.08	1.91	1.02	1.75	1.33
337	MGS	2.56	2.56	4.03	2.51	3.5	2.9	1.58	0.98	1.37	1.13
339	LFN	2.59	2.6	3.99	2.53	3.44	2.89	1.54	0.97	1.33	1.11
341	MGS	2.48	2.5	4.27	2.5	3.66	2.97	1.72	1	1.48	1.19
342	LFN	2.6	2.65	4.18	2.63	3.34	2.92	1.61	0.99	1.28	1.1
343	FRY	2.69	2.75	4.15	2.7	3.16	2.89	1.54	0.98	1.18	1.05
344	BSU	2.68	2.7	4.36	2.65	3.41	2.84	1.63	0.98	1.28	1.05
345	SDN	2.71	2.73	4.4	2.67	3.41	2.81	1.62	0.98	1.26	1.03
346	PHS	2.71	2.75	3.98	2.7	3.12	2.85	1.47	0.98	1.15	1.04
347	SDN	2.75	2.76	3.53	2.67	3.04	2.78	1.29	0.97	1.11	1.01
348	SDN	2.74	2.76	3.62	2.72	3.05	2.86	1.32	0.98	1.11	1.03
350	LFN	2.68	2.68	2.84	2.49	2.66	2.52	1.06	0.93	0.99	0.94
351	LFN	2.7	2.71	3.81	2.58	3.15	2.69	1.41	0.95	1.16	0.99
352	RDW	2.69	2.69	3.76	2.52	3.09	2.58	1.4	0.94	1.15	0.96
354	BVH	2.72	2.73	3.76	2.64	3.08	2.81	1.38	0.97	1.13	1.03
356	EOR	2.66	2.66	3.81	2.56	3.09	2.68	1.43	0.96	1.16	1
357	EOR	2.69	2.69	4.06	2.59	3.27	2.74	1.51	0.96	1.22	1.02
359	RED	2.72	2.72	4.72	2.6	3.61	2.71	1.74	0.96	1.33	1
360	EOR	2.72	2.73	4.62	2.62	3.56	2.74	1.7	0.96	1.31	1
362	EOR	2.61	2.62	3.94	2.44	3.21	2.48	1.51	0.93	1.23	0.94
363	EOR	2.56	2.58	3.64	2.39	3.08	2.41	1.42	0.92	1.2	0.93
364	EOR	2.67	2.75	2.91	2.48	2.81	2.56	1.09	0.9	1.05	0.93
365	HND	2.55	2.61	3.08	2.39	2.85	2.44	1.21	0.92	1.12	0.94
366	DCY	2.51	2.55	3.47	2.37	3.01	2.41	1.39	0.93	1.2	0.95
367	HND	2.53	2.56	3.65	2.39	3.09	2.43	1.44	0.93	1.22	0.95
370	HND	2.16	2.24	2.66	2.12	2.52	2.15	1.23	0.95	1.17	0.96
371	WWT	2.33	2.36	3.37	2.22	3.24	2.26	1.45	0.94	1.39	0.96
372	EOR	2.57	2.59	4.23	2.47	3.4	2.54	1.64	0.95	1.32	0.98
374	EOR	2.58	2.59	3.83	2.47	3.22	2.56	1.49	0.95	1.25	0.99
375	WWT	2.43	2.44	3.49	2.31	3.29	2.39	1.44	0.95	1.35	0.98
376	HND	2.27	2.28	3.3	2.12	3.53	2.19	1.45	0.93	1.56	0.96
378	HND	2.12	2.13	3.07	1.96	3.77	1.99	1.44	0.92	1.77	0.93
392	AGS	2.9	2.9	3.26	2.85	3.07	2.9	1.13	0.98	1.06	1

Appendix C-3e (Continued):

Poly #	Soil name	BL		SN_t		SN_ψ		SN_t/BL		SN_ψ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	3.15	3.15	3.48	3.02	3.33	3.05	1.1	0.96	1.06	0.97
396	AGS	2.78	2.78	3.01	2.56	3.44	2.61	1.08	0.92	1.24	0.94
401	MGS	2.79	2.79	3.39	2.66	3.44	2.8	1.21	0.95	1.23	1
403	CMO	3.27	3.28	3.32	3.04	3.3	3.01	1.01	0.93	1.01	0.92
404	AGS	3.38	3.38	3.36	3.15	3.27	3.09	1	0.93	0.97	0.91
405	CMO	3.08	3.09	3.29	2.95	3.15	2.94	1.07	0.95	1.02	0.95
408	AGS	3.11	3.11	3.25	2.88	3.15	2.87	1.05	0.92	1.01	0.92
409	AGS	3.1	3.13	3.07	2.76	3.26	2.77	0.99	0.88	1.05	0.89
410	UCS	3.01	3.01	3.13	2.77	3.36	2.78	1.04	0.92	1.12	0.92
411	COA	2.45	2.46	2.49	2.18	3.67	2.2	1.01	0.89	1.5	0.9
412	CMO	2.83	2.84	3	2.56	3.03	2.54	1.06	0.9	1.07	0.89
416	WKN	2.78	2.78	3.14	2.58	3.4	2.68	1.13	0.93	1.23	0.97
418	MMO	2.33	2.33	3.21	2.18	3.35	2.41	1.38	0.93	1.44	1.03
420	TBY	2.15	2.15	3.01	1.99	3.17	2.19	1.4	0.92	1.47	1.02
421	HND	2.28	2.33	2.8	2.18	2.61	2.24	1.23	0.93	1.15	0.96
422	HCH	2.13	2.19	2.87	2.06	2.67	2.14	1.35	0.94	1.25	0.98
423	LET	2.03	2.08	2.92	1.95	2.96	2.03	1.44	0.94	1.46	0.98
425	HND	2.26	2.28	2.84	2.12	2.57	2.23	1.26	0.93	1.14	0.98
426	MMO	2.53	2.53	2.78	2.27	3.25	2.35	1.1	0.9	1.29	0.93
428	HND	2.06	2.1	3.58	1.99	2.9	2.37	1.74	0.95	1.41	1.13
429	FLU	2.37	2.38	2.33	2.06	3.7	2.08	0.98	0.87	1.56	0.88
430	MCO	2.72	2.75	2.68	2.38	3.39	2.41	0.98	0.87	1.24	0.88
431	AGS	2.96	3	2.87	2.57	3.21	2.62	0.97	0.86	1.09	0.87
432	KVG	2.53	2.52	2.6	2.19	3	2.34	1.03	0.87	1.19	0.93
433	POK	2.46	2.43	2.52	2.12	2.78	2.22	1.02	0.87	1.13	0.91
435	BTN	2.3	2.27	2.56	2	2.62	2.42	1.11	0.88	1.14	1.07
437	POK	2.65	2.64	2.73	2.29	2.9	2.49	1.03	0.87	1.1	0.94
439	COA	2.86	2.86	2.93	2.59	3.4	2.6	1.03	0.9	1.19	0.91
440	COA	2.17	2.16	2.69	1.94	2.87	2.01	1.24	0.9	1.32	0.93
441	MMO	2.46	2.46	2.92	2.24	3.19	2.35	1.19	0.91	1.3	0.95
442	WTB	2.48	2.47	2.62	2.15	2.76	2.21	1.06	0.87	1.11	0.9
443	HND	2.33	2.36	2.77	2.18	2.59	2.26	1.19	0.92	1.11	0.96
444	MET	2.43	2.46	2.69	2.25	2.54	2.31	1.11	0.91	1.04	0.94
449	KUR	1.83	1.86	3.81	1.85	2.4	2.03	2.08	1	1.31	1.09
451	MET	1.81	1.82	3.64	1.89	2.39	2.01	2.01	1.04	1.32	1.11
452	LET	1.73	1.74	4.15	1.8	2.31	1.95	2.4	1.04	1.34	1.12
453	CHN	1.87	1.88	3.25	1.96	2.53	2.08	1.73	1.04	1.35	1.11
457	MAB	1.91	1.88	2.8	2.02	2.59	2.11	1.47	1.07	1.36	1.12
458	MAB	1.84	1.79	2.85	1.98	2.64	2.12	1.55	1.11	1.44	1.18
460	WDN	1.86	1.83	2.82	2	2.63	2.12	1.51	1.09	1.41	1.16
461	BVL	1.9	1.89	2.94	2.01	2.7	2.12	1.55	1.06	1.42	1.12
463	HND	1.98	1.98	2.55	2.08	2.45	2.1	1.29	1.05	1.24	1.06
466	HND	1.78	1.79	3.85	1.86	2.44	2.01	2.16	1.04	1.37	1.12
467	WWT	1.76	1.78	4.16	1.81	2.4	2.01	2.36	1.02	1.36	1.13
471	HUK	1.84	1.86	4.04	1.89	2.99	2.24	2.2	1.02	1.63	1.2
472	MAB	1.83	1.77	2.96	1.95	2.8	2.14	1.61	1.1	1.53	1.21
473	HND	1.88	1.88	3.64	1.94	3.09	2.18	1.94	1.03	1.65	1.16
474	MAB	1.86	1.82	3.29	1.94	2.97	2.14	1.77	1.07	1.6	1.18
475	BVL	1.84	1.8	3.82	1.9	3.39	2.14	2.08	1.05	1.85	1.19
476	MAB	1.8	1.78	3.28	1.92	3.07	2.15	1.82	1.08	1.7	1.21
478	CCL	1.84	1.84	4.36	1.88	3.72	2.2	2.37	1.02	2.02	1.2
480	HUK	1.9	1.96	4.64	1.9	3.68	2.82	2.45	0.97	1.94	1.44
481	YTW	1.92	2	4.85	1.91	3.85	3.06	2.53	0.96	2.01	1.53
484	WWT	2.12	2.16	3.54	2.04	3.04	2.48	1.67	0.94	1.43	1.15
486	YTW	1.99	2.02	4.07	1.96	3.43	2.55	2.05	0.97	1.73	1.26
487	HUK	1.85	1.73	3.32	1.84	3.18	2.06	1.8	1.07	1.72	1.19
489	HUK	1.95	1.87	3.93	1.88	3.55	2.08	2.02	1	1.82	1.11

Appendix C-3e (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	2.26	2.28	2.7	2.11	2.51	2.22	1.19	0.93	1.11	0.97
496	MET	2.01	1.95	4.09	1.93	3.67	2.05	2.03	0.99	1.82	1.05
499	CVD	1.55	1.38	2.24	1.6	2.7	1.72	1.44	1.16	1.74	1.25
508	AGS	2.84	2.88	2.98	2.51	2.91	2.52	1.05	0.87	1.02	0.88
509	PHS	2.62	2.6	2.74	2.25	2.88	2.5	1.05	0.86	1.1	0.96
510	AGS	2.58	2.59	2.85	2.34	2.85	2.3	1.1	0.9	1.11	0.89
512	BVH	2.58	2.59	2.87	2.31	2.65	2.3	1.11	0.89	1.03	0.89
513	AGS	2.8	2.83	2.96	2.49	2.94	2.49	1.05	0.88	1.05	0.88
514	PHS	2.55	2.55	2.89	2.29	2.86	2.25	1.13	0.9	1.12	0.88
515	BVH	2.52	2.51	2.91	2.33	3.23	2.23	1.15	0.93	1.28	0.89
516	BVH	2.56	2.53	2.87	2.23	2.91	2.22	1.12	0.88	1.14	0.88
517	FLU	2.6	2.59	2.87	2.21	2.65	2.23	1.1	0.85	1.02	0.86
518	MGS	2.55	2.5	2.79	2.16	3.16	2.23	1.1	0.86	1.24	0.89
519	NVR	3.02	3.07	3.03	2.62	3	2.65	1	0.85	0.99	0.86
520	AGS	2.8	2.81	2.88	2.4	3	2.5	1.03	0.86	1.07	0.89
521	POK	2.48	2.43	2.7	2.1	3.14	2.3	1.09	0.86	1.27	0.95
523	PED	2.49	2.41	2.84	2.1	3.23	2.17	1.14	0.87	1.3	0.9
524	FLU	2.28	2.22	2.64	1.91	3.86	2.04	1.16	0.86	1.7	0.92
531	GDB	2.44	2.45	2.71	2.24	2.48	2.23	1.11	0.91	1.02	0.91
532	HKR	2.29	2.31	2.79	2.13	2.57	2.26	1.22	0.92	1.12	0.98
533	HND	2.28	2.29	2.72	2.16	2.61	2.22	1.19	0.95	1.15	0.97
534	MET	2.36	2.36	2.77	2.25	2.69	2.29	1.17	0.95	1.14	0.97
536	HND	2.43	2.42	2.67	2.29	2.65	2.28	1.1	0.95	1.09	0.94
537	BVH	2.43	2.42	2.69	2.24	2.76	2.19	1.11	0.92	1.14	0.91
538	HND	2.53	2.48	2.73	2.35	2.73	2.33	1.08	0.95	1.08	0.94
539	PHS	2.41	2.42	2.66	2.22	2.69	2.18	1.1	0.92	1.12	0.9
540	KLM	2.36	2.37	2.55	2.16	2.45	2.15	1.08	0.91	1.04	0.91
543	EOR	2.61	2.55	2.82	2.41	2.91	2.37	1.08	0.94	1.12	0.93
545	IRM	2.59	2.54	2.87	2.38	3.08	2.32	1.11	0.94	1.19	0.91
547	DEL	2.61	2.54	2.88	2.36	2.93	2.36	1.1	0.93	1.12	0.93
548	BVH	2.56	2.49	2.91	2.31	3.13	2.25	1.14	0.93	1.22	0.9
549	FLU	2.54	2.49	2.88	2.24	3.15	2.21	1.14	0.9	1.24	0.89
551	FLU	2.57	2.49	2.93	2.23	2.91	2.26	1.14	0.9	1.13	0.91
553	ATL	2.51	2.47	2.75	2.24	2.67	2.28	1.09	0.9	1.07	0.92
554	ATL	3.18	3.01	2.96	2.35	2.85	2.43	0.93	0.78	0.9	0.81
555	CYG	2.59	2.54	2.98	2.18	2.68	2.27	1.15	0.86	1.03	0.9
558	DEL	3.63	3.37	2.93	2.45	2.8	2.44	0.81	0.73	0.77	0.72
559	ATL	2.4	2.56	2.83	2.19	2.81	2.39	1.18	0.86	1.17	0.93
561	ATL	2.47	2.42	3.21	2.14	3.17	2.52	1.3	0.89	1.28	1.04
562	BGH	3.11	2.95	2.86	2.31	2.78	2.38	0.92	0.78	0.89	0.81
563	BSK	2.62	2.58	2.73	2.25	2.64	2.3	1.04	0.87	1.01	0.89
564	LET	2.67	1.76	2.96	1.98	2.89	1.95	1.11	1.13	1.08	1.11
565	DEL	3.65	3.34	2.94	2.44	2.8	2.43	0.81	0.73	0.77	0.73
566	DEL	3.58	3.08	2.87	2.3	2.79	2.31	0.8	0.75	0.78	0.75
567	BSK	3.13	2.76	2.74	2.28	2.72	2.32	0.87	0.83	0.87	0.84
568	DEL	2.72	2.6	2.83	2.42	2.79	2.44	1.04	0.93	1.03	0.94
569	IRM	2.8	2.61	2.79	2.34	2.76	2.38	1	0.9	0.98	0.92
570	HAN	2.96	2.53	2.72	2.35	2.71	2.38	0.92	0.93	0.92	0.94
571	HAN	2.42	2.36	2.8	2.27	2.75	2.31	1.16	0.96	1.14	0.98
572	DVG	2.29	2.12	2.47	2.01	2.71	2.07	1.08	0.95	1.18	0.98
574	LET	3.19	2.43	2.61	2.24	2.65	2.3	0.82	0.92	0.83	0.94
575	WWT	3.1	2.49	2.48	2.04	2.75	2.09	0.8	0.82	0.89	0.84
576	DMH	2.98	2.35	2.65	2.2	2.69	2.26	0.89	0.94	0.9	0.96
577	BZR	2.35	2.01	2.54	1.99	3.02	2.01	1.08	0.99	1.28	1
578	HAN	2.87	2.25	2.7	2.12	2.7	2.22	0.94	0.94	0.94	0.99
579	LET	3.1	2.38	2.46	2.02	2.72	2.09	0.79	0.85	0.88	0.88
581	HKR	2.21	2.13	3.13	2.05	2.93	2.16	1.42	0.96	1.33	1.01

Appendix C-3e (Continued):

Poly #	Soil name	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	2.44	2.27	2.95	2.19	2.85	2.27	1.21	0.96	1.17	1
583	HAN	2.36	2.2	3.11	2.13	2.95	2.23	1.32	0.97	1.25	1.01
584	DMH	2.57	2.42	2.75	2.31	2.74	2.33	1.07	0.95	1.06	0.96
589	HAN	2.44	2.21	3.09	2.14	2.95	2.23	1.27	0.97	1.21	1.01
590	CHN	1.78	1.7	2.65	1.98	2.58	2.11	1.49	1.16	1.45	1.24
591	BVL	1.9	1.73	2.72	1.95	2.68	2.11	1.43	1.13	1.41	1.22
592	FMT	2.07	1.73	2.69	1.92	2.73	2.1	1.3	1.11	1.32	1.22
593	CVD	1.95	1.73	2.62	1.94	2.67	2.13	1.34	1.12	1.37	1.23
595	ATP	1.76	1.64	2.5	1.92	2.76	2.17	1.43	1.17	1.57	1.32
596	FMT	2.51	1.76	2.69	1.96	2.81	2.12	1.07	1.11	1.12	1.21
598	FMT	2.58	1.77	2.72	1.96	2.82	2.12	1.05	1.11	1.09	1.2
599	MAB	2.62	1.73	2.72	1.9	2.68	2.09	1.04	1.1	1.02	1.21
600	CVD	2.69	1.78	2.7	1.91	2.76	2.08	1	1.07	1.02	1.17
601	MAB	2.12	1.73	2.66	1.87	2.72	2.05	1.25	1.08	1.28	1.18
602	MAB	2.44	1.73	2.71	1.87	2.7	2.05	1.11	1.09	1.1	1.19
603	MAB	2.95	1.92	2.64	1.83	2.88	1.98	0.89	0.95	0.98	1.03
605	HDY	2.75	1.83	2.54	1.81	2.72	1.95	0.93	0.99	0.99	1.07
606	CVD	2.11	1.58	2.36	1.71	2.66	1.83	1.12	1.08	1.26	1.16
607	CVD	2.2	1.68	2.49	1.76	2.73	1.88	1.13	1.05	1.24	1.12
608	MCT	2.72	1.84	2.5	1.84	2.64	1.97	0.92	1	0.97	1.07
609	TIY	2.68	1.76	2.44	1.79	2.6	1.9	0.91	1.01	0.97	1.08
610	BVL	3.04	1.92	2.54	1.82	2.8	1.93	0.83	0.95	0.92	1
611	HUK	2.65	1.84	2.55	1.85	2.65	1.97	0.96	1.01	1	1.07
613	CCL	3.06	1.95	2.55	1.91	2.58	2.06	0.84	0.98	0.84	1.05
615	CVD	3.15	1.83	2.72	1.87	2.86	1.95	0.86	1.02	0.91	1.06
616	CHN	3.16	1.81	2.78	1.91	2.83	2	0.88	1.05	0.89	1.11
617	FMT	3	1.82	2.82	1.91	2.89	2.07	0.94	1.05	0.96	1.13
618	CHN	2.86	1.83	2.79	1.92	2.84	2.09	0.97	1.05	0.99	1.14
619	FMT	2.86	1.82	2.81	1.95	2.86	2.1	0.98	1.07	1	1.15
620	MAB	2.52	1.89	2.76	1.99	2.77	2.14	1.1	1.05	1.1	1.13
621	TTH	2.45	1.9	2.68	1.97	2.71	2.1	1.1	1.03	1.11	1.11
622	TTH	2.35	1.92	2.68	1.98	2.69	2.12	1.14	1.03	1.14	1.1
623	ZRB	2.17	1.95	2.66	2.01	2.64	2.15	1.22	1.03	1.22	1.1
624	THA	2.05	1.97	2.57	2	2.57	2.11	1.25	1.01	1.25	1.07
626	SIL	2.06	1.99	2.79	2.09	2.71	2.28	1.36	1.05	1.32	1.15
627	MAB	2.25	1.94	2.8	2.05	2.74	2.22	1.25	1.06	1.22	1.14
628	BVL	2.43	1.9	2.83	2.02	2.78	2.17	1.16	1.06	1.14	1.15
629	SIL	2.36	1.92	2.82	2.03	2.77	2.2	1.19	1.06	1.17	1.15
631	MAB	2.83	1.82	2.91	1.97	2.88	2.1	1.03	1.08	1.02	1.16
632	MAB	3.13	1.76	2.96	1.99	2.92	2.09	0.95	1.13	0.93	1.19
633	MAB	3.1	1.74	2.93	1.97	2.89	2.06	0.94	1.13	0.93	1.19
634	MAB	2.73	1.83	2.9	1.99	2.85	2.11	1.06	1.09	1.04	1.15
635	MAB	2.91	1.8	2.92	1.98	2.88	2.09	1	1.1	0.99	1.16
637	MSN	3.12	1.74	2.94	1.97	2.9	2.06	0.94	1.13	0.93	1.18
638	ZRB	2.96	1.78	2.93	1.98	2.89	2.09	0.99	1.11	0.97	1.17
639	PUR	2.63	1.69	2.83	1.89	2.81	1.97	1.08	1.12	1.07	1.16
641	MAB	3.09	1.72	2.87	1.94	2.83	2.02	0.93	1.13	0.92	1.17
642	MAB	3.23	1.7	2.85	1.95	2.74	2	0.88	1.15	0.85	1.18
643	CHN	3	1.71	2.77	1.89	2.79	1.95	0.93	1.1	0.93	1.14
645	DLB	2.46	1.77	2.83	1.93	2.8	1.96	1.15	1.09	1.14	1.1
648	CFD	3.21	2.08	2.54	1.77	3.04	1.86	0.79	0.85	0.95	0.9
649	BVL	3.89	1.73	2.77	1.96	2.79	2.06	0.71	1.13	0.72	1.19
650	MAB	3.26	1.81	2.72	1.94	2.74	2.03	0.83	1.07	0.84	1.12
651	RDM	2.56	1.92	2.67	1.94	2.64	2.04	1.04	1.01	1.03	1.06
653	LET	3.04	2.02	2.56	1.9	2.71	1.98	0.84	0.94	0.89	0.98
654	PUY	3.11	2.01	2.59	1.94	2.61	2.08	0.83	0.96	0.84	1.03
655	DEL	3.07	2.5	2.66	2.08	2.71	2.12	0.87	0.83	0.89	0.85

Appendix C-3e (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	2.9	1.96	2.62	1.92	2.68	1.99	0.9	0.98	0.92	1.02
657	LET	2.85	1.78	2.76	1.91	2.74	1.97	0.97	1.07	0.96	1.1
658	CMY	2.89	1.65	2.78	1.82	2.62	1.92	0.96	1.1	0.91	1.16
659	DEL	2.6	2.28	2.58	2.07	2.6	2.1	0.99	0.91	1	0.92
660	CVD	2.86	1.9	2.54	1.88	2.62	2.01	0.89	0.99	0.92	1.06
661	RDM	2.9	1.84	2.7	1.93	2.69	2.02	0.93	1.05	0.93	1.1
663	LET	2.98	1.74	2.76	1.88	2.71	1.96	0.93	1.08	0.91	1.13
664	RDM	3	1.82	2.65	1.88	2.68	1.97	0.89	1.03	0.9	1.08
666	PUR	2.48	1.59	2.64	1.77	2.82	1.83	1.07	1.11	1.14	1.15
667	LET	2.6	1.74	2.84	1.92	2.8	1.97	1.09	1.1	1.08	1.13
669	LOB	2.3	2.13	3.46	2.06	3.44	2.51	1.5	0.97	1.49	1.18
671	PHS	2.5	2.38	2.98	2.17	2.89	2.3	1.19	0.91	1.16	0.97
672	PED	2.57	2.45	2.99	2.18	2.8	2.27	1.16	0.89	1.09	0.92
673	MMO	2.59	2.41	3.05	2.17	2.84	2.25	1.18	0.9	1.09	0.93
675	BTN	2.52	2.3	2.8	2.02	3.33	2.13	1.11	0.88	1.32	0.93
676	CYG	2.36	2.24	2.72	1.94	3.77	2.05	1.16	0.87	1.6	0.92
677	BEN	2.57	2.41	2.98	2.14	2.88	2.22	1.16	0.89	1.12	0.92
680	PNC	2.72	1.89	3.53	2.23	3.38	2.05	1.3	1.18	1.24	1.09
681	CYG	2.63	2.18	3.25	2.17	3.15	2.19	1.24	0.99	1.2	1
682	BEN	2.73	2.14	3.12	2.12	3.12	2.11	1.14	0.99	1.14	0.99
683	HUB	2.69	2.26	2.51	1.94	2.65	2.13	0.93	0.86	0.98	0.94
684	CAR	2.87	2.02	3.27	2.17	3.14	2.05	1.14	1.07	1.09	1.02
686	LOB	2.48	2.02	3.53	2.13	3.46	2.34	1.42	1.05	1.4	1.16
689	CAR	2.61	2.1	3.22	2.37	3.02	2.58	1.23	1.13	1.16	1.23
690	RMY	2.69	2.27	2.85	2.04	3.08	2.14	1.06	0.9	1.14	0.94
691	HUB	3.02	2.35	2.68	2.05	2.53	2.21	0.89	0.87	0.84	0.94
692	BTN	2.97	2.41	2.55	1.96	2.7	2.08	0.86	0.81	0.91	0.87
693	RMY	2.39	2.23	2.64	1.93	3.68	2.05	1.11	0.87	1.54	0.92
694	HUB	2.49	2.24	2.6	1.98	2.88	2.2	1.05	0.88	1.16	0.98
695	BTN	2.29	2.15	2.53	1.94	2.54	2.34	1.1	0.9	1.11	1.08
696	BTN	2.36	2.16	2.48	1.95	2.5	2.16	1.05	0.9	1.06	1
698	MYW	2.32	2	2.53	1.93	2.4	2.14	1.09	0.96	1.03	1.07
699	HUB	2.26	2.1	2.43	1.91	2.44	2.07	1.08	0.91	1.08	0.99
702	CVL	2.39	2.37	2.57	2.07	2.69	2.17	1.07	0.87	1.12	0.92
703	HGV	2.19	2.15	2.5	1.95	2.61	2.08	1.14	0.91	1.19	0.97
705	MCO	2.02	2.01	2.11	1.82	2.01	1.86	1.04	0.91	0.99	0.93
708	MLA	2.07	2.04	2.82	1.98	3	2.24	1.36	0.97	1.45	1.1
709	COA	2.07	2.04	2.83	1.95	3.68	2.1	1.37	0.95	1.78	1.03
710	COA	2.21	2.19	2.68	1.98	2.99	2.13	1.21	0.9	1.35	0.97
711	COA	2.09	2.07	2.72	1.92	3.4	2.04	1.3	0.92	1.63	0.99
715	KVG	2.11	2.11	2.97	1.98	3.4	2.18	1.41	0.94	1.61	1.04

Appendix C-4a: Annual continuous wheat residue (t/ha) averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Poly #	Soil name	BL		SN_t		SN_{tp}		SN/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	2.91	1.93	2.94	1.86	3.22	2.1	1.01	0.96	1.11	1.09
3	DON	3.03	2.01	3.13	1.99	3.41	2.23	1.03	0.99	1.13	1.11
4	HZM	3.02	2	3.16	2	3.42	2.22	1.05	1	1.13	1.11
5	DON	3.07	2.03	3.26	2.06	3.52	2.28	1.06	1.02	1.15	1.13
6	ESH	3.11	2.07	3.27	2.08	3.54	2.32	1.05	1	1.14	1.12
7	COS	2.99	1.98	3.07	1.94	3.35	2.18	1.03	0.98	1.12	1.1
9	BBN	3.22	2.13	3.49	2.21	3.73	2.43	1.08	1.04	1.16	1.14
10	BBN	3.37	2.22	3.81	2.4	4.03	2.61	1.13	1.08	1.19	1.18
11	ESH	3.36	2.22	3.8	2.4	4.02	2.61	1.13	1.08	1.2	1.18
13	HZM	3.33	2.19	3.64	2.3	3.84	2.5	1.09	1.05	1.15	1.14
14	COS	3.36	2.21	3.71	2.34	3.93	2.56	1.1	1.06	1.17	1.16
15	ABT	3.42	2.25	3.8	2.4	4	2.59	1.11	1.07	1.17	1.15
19	HZM	3.43	2.25	3.83	2.41	4.02	2.61	1.12	1.07	1.17	1.16
20	LAD	3.43	2.26	3.88	2.45	4.07	2.64	1.13	1.08	1.18	1.17
22	COS	3.48	2.28	3.9	2.46	4.05	2.63	1.12	1.08	1.16	1.15
27	DON	3.25	2.15	3.48	2.2	3.66	2.39	1.07	1.02	1.13	1.11
28	HZM	3.05	2.02	3.18	2.01	3.44	2.25	1.04	1	1.13	1.11
32	HRT	3.48	2.29	3.99	2.52	4.13	2.69	1.15	1.1	1.19	1.17
33	HRT	3.47	2.28	3.96	2.5	4.11	2.67	1.14	1.09	1.19	1.17
36	COS	3.38	2.23	3.8	2.4	3.96	2.58	1.12	1.08	1.17	1.16
47	DON	3.27	2.17	3.59	2.27	3.82	2.49	1.1	1.05	1.17	1.15
48	DON	3.35	2.21	3.78	2.39	3.98	2.59	1.13	1.08	1.19	1.17
49	TAG	3.39	2.24	3.85	2.43	4.04	2.63	1.13	1.09	1.19	1.17
51	SAD	3.44	2.27	3.97	2.5	4.17	2.71	1.15	1.1	1.21	1.19
52	VVW	3.43	2.26	3.91	2.47	4.09	2.66	1.14	1.09	1.19	1.18
53	TAG	3.45	2.27	3.91	2.47	4.08	2.65	1.14	1.09	1.18	1.17
54	ESH	3.43	2.26	3.97	2.5	4.18	2.71	1.16	1.11	1.22	1.2
56	ZBR	3.3	2.2	3.54	2.26	3.8	2.5	1.07	1.03	1.15	1.13
59	FAL	3.2	2.14	3.41	2.17	3.7	2.42	1.07	1.02	1.15	1.13
60	BBN	3.25	2.17	3.45	2.2	3.76	2.46	1.06	1.01	1.16	1.13
61	RYF	3.35	2.21	3.8	2.4	4.03	2.62	1.13	1.08	1.2	1.18
62	DVS	2.97	1.98	3.12	1.98	3.4	2.22	1.05	1	1.14	1.12
64	JUH	3.12	2.08	3.31	2.11	3.6	2.35	1.06	1.01	1.15	1.13
68	HRT	3.09	2.05	3.33	2.11	3.59	2.34	1.08	1.03	1.16	1.14
70	JUH	3.24	2.15	3.6	2.28	3.85	2.5	1.11	1.06	1.19	1.17
71	BBN	3.34	2.21	3.77	2.38	4	2.6	1.13	1.08	1.2	1.18
72	BLY	3.33	2.2	3.77	2.38	4	2.6	1.13	1.08	1.2	1.18
73	RYF	3.31	2.19	3.7	2.34	3.93	2.56	1.12	1.07	1.19	1.17
74	JUH	3.4	2.24	3.87	2.45	4.1	2.66	1.14	1.09	1.21	1.19
75	DIG	3.23	2.16	3.45	2.2	3.74	2.45	1.07	1.02	1.16	1.14
76	JUH	3.24	2.15	3.56	2.25	3.82	2.49	1.1	1.05	1.18	1.16
77	LAD	3.3	2.19	3.63	2.3	3.89	2.54	1.1	1.05	1.18	1.16
78	ABT	3.26	2.16	3.55	2.26	3.82	2.49	1.09	1.04	1.17	1.15
80	BWY	3.24	2.16	3.46	2.2	3.76	2.46	1.07	1.02	1.16	1.14
81	HZM	3.25	2.17	3.48	2.22	3.77	2.47	1.07	1.02	1.16	1.14
83	BUD	3.29	2.2	3.5	2.24	3.8	2.5	1.07	1.02	1.16	1.14
84	HZM	3.3	2.2	3.52	2.25	3.82	2.51	1.07	1.02	1.16	1.14
87	NPA	3.23	2.16	3.38	2.16	3.67	2.42	1.05	1	1.14	1.12
88	FAL	3.23	2.16	3.38	2.16	3.67	2.42	1.05	1	1.14	1.12
89	JUH	3	1.99	3.06	1.94	3.34	2.19	1.02	0.98	1.12	1.1
91	HZM	3.2	2.13	3.32	2.12	3.61	2.38	1.04	0.99	1.13	1.12
93	DON	3.21	2.15	3.34	2.14	3.63	2.4	1.04	0.99	1.13	1.12
94	HRT	3.24	2.16	3.46	2.2	3.74	2.45	1.07	1.02	1.16	1.14
97	FAL	3.33	2.23	3.55	2.26	3.84	2.52	1.07	1.02	1.16	1.13
98	HZM	3.47	2.34	3.67	2.37	3.98	2.64	1.06	1.01	1.15	1.13

Appendix C-4a (Continued):

Poly #	Soil name	BL		SN_i		SN_{ip}		SN_i/BL		SN_{ip}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	3.64	2.44	3.9	2.51	4.2	2.76	1.07	1.03	1.15	1.13
101	FAL	3.29	2.2	3.52	2.24	3.81	2.5	1.07	1.02	1.16	1.14
102	WHW	3.36	2.24	3.59	2.29	3.89	2.55	1.07	1.02	1.16	1.14
103	ABT	3.37	2.27	3.61	2.31	3.91	2.58	1.07	1.02	1.16	1.14
104	HZM	3.43	2.31	3.67	2.36	3.98	2.62	1.07	1.02	1.16	1.14
105	CTE	3.58	2.41	3.84	2.47	4.15	2.74	1.07	1.03	1.16	1.14
107	ALC	3.28	2.2	3.47	2.22	3.76	2.48	1.06	1.01	1.15	1.13
108	HZM	3.42	2.32	3.66	2.36	3.96	2.63	1.07	1.02	1.16	1.13
109	PRV	3.47	2.35	3.7	2.39	4.01	2.66	1.07	1.02	1.16	1.13
110	CTE	3.67	2.48	3.94	2.54	4.25	2.81	1.07	1.03	1.16	1.13
112	ALC	3.51	2.37	3.77	2.43	4.07	2.7	1.07	1.02	1.16	1.14
130	DVS	3.03	2.06	3.05	2	3.39	2.29	1	0.97	1.12	1.11
132	CTE	3.08	2.09	3.05	2	3.37	2.29	0.99	0.96	1.09	1.09
133	BBN	3.28	2.19	3.43	2.19	3.73	2.45	1.05	1	1.14	1.12
135	DVS	3.24	2.17	3.42	2.18	3.72	2.44	1.06	1.01	1.15	1.13
144	BBN	3.03	2.03	2.94	1.87	3.23	2.14	0.97	0.92	1.07	1.05
170	HUB	3.07	2.05	2.95	1.88	3.26	2.16	0.96	0.92	1.06	1.06
171	HUB	2.99	2	2.97	1.89	3.29	2.17	0.99	0.95	1.1	1.09
172	KTH	2.96	1.97	2.99	1.9	3.3	2.17	1.01	0.96	1.12	1.1
173	CUL	2.95	1.97	2.99	1.9	3.3	2.17	1.02	0.96	1.12	1.1
176	HRT	2.9	1.94	3	1.9	3.29	2.16	1.03	0.98	1.13	1.12
177	HRT	2.96	1.97	3.03	1.92	3.33	2.19	1.02	0.97	1.12	1.11
178	HPE	3.05	2.02	3.21	2.02	3.5	2.29	1.05	1	1.15	1.13
180	KNZ	2.99	1.99	3.1	1.96	3.39	2.23	1.04	0.99	1.14	1.12
181	COS	2.94	1.95	3.01	1.91	3.31	2.18	1.03	0.98	1.13	1.11
182	ATO	3.1	2.05	3.29	2.07	3.58	2.34	1.06	1.01	1.15	1.14
185	UCS	3.08	2.04	3.26	2.05	3.55	2.32	1.06	1.01	1.15	1.14
189	CUL	2.91	1.94	3.01	1.91	3.31	2.17	1.03	0.98	1.14	1.12
192	COA	2.93	1.95	3	1.9	3.3	2.17	1.02	0.97	1.13	1.11
193	MLA	2.92	1.94	2.99	1.88	3.29	2.16	1.03	0.97	1.13	1.11
194	MLA	3	1.99	3.15	1.98	3.44	2.25	1.05	1	1.15	1.13
196	LNN	3.21	2.12	3.46	2.18	3.74	2.44	1.08	1.03	1.17	1.15
197	COA	3.02	2	3.19	2	3.48	2.27	1.06	1	1.15	1.14
198	COA	2.94	1.95	3.06	1.92	3.35	2.19	1.04	0.99	1.14	1.12
201	HRT	2.95	1.97	2.99	1.9	3.3	2.17	1.01	0.96	1.12	1.1
211	ZOR	2.9	1.93	2.97	1.89	3.26	2.15	1.02	0.98	1.13	1.11
212	ABC	2.89	1.93	2.97	1.88	3.26	2.15	1.03	0.97	1.13	1.11
215	ABC	2.91	1.94	2.99	1.9	3.29	2.16	1.03	0.98	1.13	1.11
218	KNZ	2.92	1.95	3.05	1.93	3.35	2.19	1.05	0.99	1.15	1.13
221	EGL	2.88	1.92	2.95	1.87	3.25	2.14	1.03	0.97	1.13	1.12
224	ABC	2.88	1.92	2.96	1.87	3.26	2.15	1.03	0.98	1.13	1.12
227	TNW	2.9	1.93	3.03	1.91	3.32	2.18	1.05	0.99	1.15	1.13
231	ABC	2.94	1.96	3.11	1.96	3.4	2.22	1.06	1	1.16	1.13
232	MLA	2.89	1.93	3.01	1.9	3.3	2.17	1.04	0.98	1.14	1.12
233	KNZ	2.88	1.93	3	1.89	3.29	2.16	1.04	0.98	1.14	1.12
236	ABC	2.91	1.95	3.02	1.91	3.31	2.17	1.04	0.98	1.14	1.12
240	KNZ	2.93	1.96	3.07	1.94	3.37	2.21	1.05	0.99	1.15	1.13
246	GDI	2.93	1.96	3.06	1.94	3.35	2.2	1.04	0.99	1.14	1.12
248	GDI	2.94	1.96	3.07	1.95	3.39	2.23	1.05	0.99	1.15	1.13
250	ABC	3.01	2	3.2	2.03	3.5	2.3	1.06	1.01	1.16	1.15
252	UCS	3.05	2.02	3.23	2.04	3.52	2.3	1.06	1.01	1.15	1.14
253	COD	3.1	2.05	3.31	2.09	3.6	2.35	1.07	1.02	1.16	1.15
254	PIB	3.18	2.1	3.43	2.16	3.72	2.42	1.08	1.03	1.17	1.15
258	POK	3.26	2.14	3.62	2.24	3.91	2.52	1.11	1.05	1.2	1.17
259	RDW	3.12	2.06	3.39	2.12	3.68	2.39	1.08	1.03	1.18	1.16
261	NIT	3.09	2.04	3.35	2.1	3.65	2.37	1.09	1.03	1.18	1.16
264	COA	2.98	1.98	3.19	2.01	3.48	2.27	1.07	1.02	1.17	1.15

Appendix C-4a (Continued):

Poly #	Soil name	BL		SN_l		SN_w		SN_l/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	2.97	1.97	3.16	1.99	3.45	2.25	1.06	1.01	1.16	1.14
271	FLU	3.29	2.17	3.68	2.31	3.96	2.56	1.12	1.06	1.2	1.18
275	RDW	3.37	2.22	3.8	2.39	4.07	2.64	1.13	1.07	1.21	1.19
279	ABC	3.16	2.09	3.46	2.18	3.75	2.45	1.09	1.04	1.19	1.17
290	ABC	2.91	1.95	3.03	1.92	3.34	2.2	1.04	0.99	1.15	1.13
291	LCY	2.93	1.96	3.07	1.95	3.38	2.23	1.05	1	1.15	1.14
292	TMN	2.93	1.96	3.08	1.95	3.39	2.24	1.05	1	1.16	1.14
296	NIT	2.99	1.99	3.2	2.04	3.47	2.3	1.07	1.02	1.16	1.15
297	GOG	2.98	1.99	3.16	2.01	3.46	2.28	1.06	1.01	1.16	1.15
301	SDN	3.04	2.03	3.28	2.09	3.56	2.34	1.08	1.03	1.17	1.16
302	LCY	3.05	2.03	3.3	2.1	3.57	2.35	1.08	1.03	1.17	1.16
306	LCY	3.05	2.03	3.28	2.08	3.57	2.35	1.08	1.03	1.17	1.16
310	FRY	3.37	2.24	3.83	2.41	4.1	2.66	1.14	1.08	1.22	1.19
311	FRY	3.34	2.21	3.75	2.37	4.03	2.62	1.12	1.07	1.21	1.19
312	FRY	3.35	2.22	3.79	2.39	4.07	2.64	1.13	1.08	1.22	1.19
315	NTW	2.95	1.96	3.1	1.96	3.41	2.24	1.05	1	1.16	1.14
316	LCY	2.96	1.97	3.12	1.97	3.43	2.24	1.05	1	1.16	1.14
317	LCY	2.97	1.98	3.15	2	3.45	2.27	1.06	1.01	1.16	1.15
320	FRY	2.98	1.98	3.17	2.01	3.47	2.27	1.06	1.01	1.16	1.15
322	LCY	2.99	1.99	3.18	2.01	3.49	2.28	1.06	1.01	1.17	1.15
323	LCY	3.02	2.01	3.23	2.04	3.53	2.31	1.07	1.02	1.17	1.15
325	LCY	3.08	2.05	3.33	2.11	3.63	2.37	1.08	1.03	1.18	1.16
326	LCY	3.11	2.07	3.4	2.16	3.67	2.41	1.09	1.04	1.18	1.16
334	LCY	3.45	2.29	3.96	2.49	4.24	2.74	1.15	1.09	1.23	1.2
335	FRY	3.13	2.08	3.41	2.15	3.7	2.42	1.09	1.03	1.18	1.16
337	MGS	3.38	2.25	3.74	2.36	4.01	2.61	1.11	1.05	1.19	1.16
339	LFN	3.41	2.27	3.79	2.39	4.06	2.63	1.11	1.05	1.19	1.16
341	MGS	3.29	2.19	3.66	2.3	3.94	2.56	1.11	1.05	1.2	1.17
342	LFN	3.4	2.25	3.84	2.41	4.12	2.67	1.13	1.07	1.21	1.18
343	FRY	3.47	2.3	3.96	2.49	4.24	2.74	1.14	1.08	1.22	1.19
344	BSU	3.48	2.31	3.94	2.48	4.22	2.72	1.13	1.07	1.21	1.18
345	SDN	3.52	2.33	4	2.52	4.27	2.75	1.14	1.08	1.21	1.18
346	PHS	3.49	2.31	3.99	2.51	4.27	2.75	1.14	1.09	1.22	1.19
347	SDN	3.52	2.33	4.05	2.55	4.32	2.79	1.15	1.09	1.22	1.19
348	SDN	3.51	2.32	4.03	2.54	4.31	2.78	1.15	1.09	1.23	1.2
350	LFN	3.5	2.31	3.99	2.51	4.25	2.74	1.14	1.09	1.21	1.19
351	LFN	3.52	2.33	4	2.52	4.26	2.75	1.14	1.08	1.21	1.18
352	RDW	3.52	2.33	3.99	2.51	4.25	2.74	1.13	1.08	1.21	1.18
354	BVH	3.54	2.36	3.97	2.5	4.22	2.74	1.12	1.06	1.19	1.16
356	EOR	3.49	2.33	3.91	2.46	4.19	2.7	1.12	1.06	1.2	1.16
357	EOR	3.5	2.33	3.94	2.48	4.21	2.72	1.13	1.06	1.2	1.17
359	RED	3.49	2.31	3.96	2.48	4.25	2.73	1.13	1.07	1.22	1.18
360	EOR	3.52	2.33	3.99	2.5	4.26	2.74	1.13	1.07	1.21	1.18
362	EOR	3.42	2.25	3.85	2.41	4.11	2.64	1.13	1.07	1.2	1.17
363	EOR	3.38	2.22	3.79	2.37	4.05	2.59	1.12	1.06	1.2	1.17
364	EOR	3.44	2.25	3.87	2.39	4.15	2.64	1.13	1.06	1.2	1.17
365	HND	3.39	2.23	3.79	2.35	4.06	2.6	1.12	1.06	1.2	1.17
366	DCY	3.38	2.23	3.78	2.36	4.05	2.6	1.12	1.06	1.2	1.17
367	HND	3.39	2.23	3.79	2.37	4.06	2.61	1.12	1.06	1.2	1.17
370	HND	3.29	2.18	3.6	2.25	3.88	2.51	1.1	1.04	1.18	1.15
371	WWT	3.25	2.15	3.57	2.23	3.86	2.49	1.1	1.03	1.19	1.15
372	EOR	3.42	2.26	3.83	2.39	4.12	2.65	1.12	1.06	1.21	1.17
374	EOR	3.42	2.27	3.82	2.39	4.1	2.64	1.12	1.05	1.2	1.16
375	WWT	3.29	2.19	3.62	2.27	3.91	2.53	1.1	1.03	1.19	1.15
376	HND	3.14	2.09	3.4	2.12	3.7	2.39	1.08	1.02	1.18	1.14
378	HND	3	1.99	3.2	1.99	3.51	2.26	1.07	1	1.17	1.13
392	AGS	3.63	2.39	4.23	2.66	4.49	2.9	1.17	1.11	1.24	1.21

Appendix C-4a (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	3.84	2.51	4.56	2.86	4.81	3.09	1.19	1.14	1.25	1.23
396	AGS	3.5	2.28	4	2.48	4.27	2.73	1.14	1.09	1.22	1.2
401	MGS	3.48	2.27	3.97	2.44	4.27	2.72	1.14	1.08	1.23	1.2
403	CMO	3.97	2.58	4.71	2.95	4.95	3.16	1.19	1.14	1.25	1.22
404	AGS	4.04	2.64	4.87	3.06	5.11	3.27	1.2	1.16	1.26	1.24
405	CMO	3.8	2.49	4.48	2.81	4.73	3.03	1.18	1.13	1.24	1.22
408	AGS	3.86	2.52	4.51	2.82	4.73	3.02	1.17	1.12	1.22	1.2
409	AGS	3.85	2.49	4.46	2.76	4.67	2.97	1.16	1.11	1.21	1.19
410	UCS	3.74	2.43	4.34	2.7	4.58	2.92	1.16	1.11	1.22	1.2
411	COA	3.21	2.09	3.53	2.2	3.8	2.44	1.1	1.05	1.18	1.17
412	CMO	3.66	2.39	4.19	2.61	4.4	2.82	1.14	1.09	1.2	1.18
416	WKN	3.45	2.25	3.93	2.41	4.24	2.7	1.14	1.07	1.23	1.2
418	MMO	3.13	2.06	3.4	2.11	3.69	2.38	1.08	1.03	1.18	1.16
420	TBY	2.99	1.97	3.17	1.97	3.46	2.25	1.06	1	1.16	1.14
421	HND	3.3	2.18	3.6	2.24	3.87	2.49	1.09	1.03	1.17	1.14
422	HCH	3.19	2.11	3.42	2.13	3.71	2.39	1.07	1.01	1.16	1.13
423	LET	3.04	2.02	3.19	1.99	3.51	2.26	1.05	0.99	1.15	1.12
425	HND	3.29	2.17	3.51	2.18	3.79	2.43	1.07	1.01	1.15	1.12
426	MMO	3.3	2.16	3.64	2.25	3.92	2.52	1.1	1.05	1.19	1.17
428	HND	3.17	2.08	3.32	2.07	3.58	2.3	1.05	0.99	1.13	1.1
429	FLU	3.13	2.04	3.41	2.11	3.67	2.36	1.09	1.04	1.17	1.16
430	MCO	3.48	2.26	3.91	2.42	4.15	2.65	1.12	1.07	1.19	1.18
431	AGS	3.7	2.38	4.21	2.6	4.44	2.82	1.14	1.09	1.2	1.18
432	KVG	3.29	2.14	3.61	2.23	3.88	2.49	1.1	1.04	1.18	1.16
433	POK	3.26	2.13	3.54	2.19	3.81	2.45	1.09	1.03	1.17	1.15
435	BTN	3	1.95	3.22	1.99	3.52	2.27	1.08	1.02	1.18	1.16
437	POK	3.37	2.19	3.75	2.31	4	2.56	1.11	1.06	1.19	1.17
439	COA	3.6	2.34	4.12	2.56	4.36	2.79	1.14	1.09	1.21	1.19
440	COA	3.01	1.98	3.19	1.98	3.48	2.25	1.06	1	1.16	1.14
441	MMO	3.24	2.12	3.56	2.2	3.85	2.47	1.1	1.04	1.19	1.17
442	WTB	3.34	2.19	3.64	2.25	3.9	2.51	1.09	1.03	1.17	1.15
443	HND	3.31	2.18	3.58	2.22	3.85	2.47	1.08	1.02	1.16	1.13
444	MET	3.3	2.16	3.61	2.23	3.84	2.45	1.09	1.03	1.17	1.13
449	KUR	3.06	2	3.13	1.94	3.41	2.19	1.02	0.97	1.11	1.1
451	MET	3.12	2.02	3.18	1.96	3.4	2.17	1.02	0.97	1.09	1.07
452	LET	3.05	1.98	3.08	1.9	3.34	2.14	1.01	0.96	1.1	1.08
453	CHN	3.19	2.07	3.26	2.02	3.45	2.2	1.02	0.98	1.08	1.07
457	MAB	3.28	2.12	3.38	2.08	3.52	2.23	1.03	0.98	1.07	1.05
458	MAB	3.34	2.16	3.47	2.12	3.56	2.24	1.04	0.98	1.07	1.04
460	WDN	3.33	2.15	3.44	2.11	3.55	2.24	1.04	0.98	1.07	1.04
461	BVL	3.28	2.12	3.36	2.07	3.51	2.22	1.03	0.98	1.07	1.05
463	HND	3.27	2.11	3.35	2.08	3.51	2.23	1.03	0.98	1.08	1.06
466	HND	3.1	2.02	3.16	1.95	3.38	2.16	1.02	0.97	1.09	1.07
467	WWT	3.04	1.98	3.09	1.91	3.36	2.16	1.02	0.96	1.1	1.09
471	HUK	3.14	2.05	3.21	1.99	3.41	2.18	1.02	0.97	1.08	1.07
472	MAB	3.36	2.17	3.45	2.11	3.56	2.25	1.03	0.97	1.06	1.04
473	HND	3.23	2.09	3.29	2.04	3.45	2.2	1.02	0.97	1.07	1.05
474	MAB	3.3	2.13	3.37	2.07	3.5	2.22	1.02	0.97	1.06	1.04
475	BVL	3.29	2.13	3.34	2.06	3.46	2.2	1.02	0.97	1.05	1.03
476	MAB	3.35	2.17	3.39	2.08	3.52	2.24	1.01	0.96	1.05	1.03
478	CCL	3.23	2.1	3.28	2.03	3.41	2.18	1.01	0.97	1.06	1.04
480	HUK	3.11	2.03	3.19	2	3.4	2.19	1.03	0.98	1.1	1.08
481	YTW	3.07	2.02	3.17	2	3.39	2.19	1.03	0.99	1.1	1.09
484	WWT	3.2	2.1	3.36	2.1	3.59	2.3	1.05	1	1.12	1.09
486	YTW	3.18	2.08	3.28	2.05	3.48	2.23	1.03	0.98	1.09	1.07
487	HUK	3.33	2.15	3.32	2.03	3.48	2.2	1	0.95	1.05	1.03
489	HUK	3.26	2.12	3.29	2.04	3.47	2.2	1.01	0.96	1.06	1.04

Appendix C-4a (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	3.24	2.13	3.45	2.14	3.67	2.35	1.07	1	1.13	1.1
496	MET	3.26	2.11	3.31	2.06	3.49	2.22	1.02	0.97	1.07	1.05
499	CVD	3.36	2.16	3.18	1.92	3.38	2.13	0.95	0.89	1.01	0.99
508	AGS	3.62	2.34	4.12	2.54	4.33	2.76	1.14	1.08	1.2	1.18
509	PHS	3.31	2.14	3.66	2.26	3.92	2.51	1.11	1.05	1.19	1.17
510	AGS	3.45	2.25	3.88	2.4	4.09	2.62	1.12	1.07	1.18	1.16
512	BVH	3.39	2.2	3.78	2.32	4	2.56	1.12	1.06	1.18	1.16
513	AGS	3.6	2.33	4.09	2.52	4.3	2.74	1.14	1.08	1.19	1.18
514	PHS	3.38	2.21	3.76	2.31	3.99	2.55	1.11	1.05	1.18	1.16
515	BVH	3.39	2.22	3.76	2.3	3.99	2.55	1.11	1.04	1.17	1.15
516	BVH	3.35	2.19	3.7	2.27	3.94	2.52	1.1	1.04	1.18	1.15
517	FLU	3.39	2.21	3.76	2.31	4	2.56	1.11	1.05	1.18	1.16
518	MGS	3.27	2.13	3.59	2.21	3.84	2.46	1.1	1.04	1.17	1.15
519	NVR	3.77	2.43	4.32	2.66	4.53	2.88	1.15	1.09	1.2	1.19
520	AGS	3.53	2.28	3.97	2.45	4.21	2.68	1.13	1.07	1.19	1.17
521	POK	3.16	2.06	3.44	2.12	3.72	2.38	1.09	1.03	1.17	1.16
523	PED	3.21	2.1	3.49	2.15	3.75	2.41	1.09	1.03	1.17	1.15
524	FLU	2.99	1.96	3.16	1.95	3.45	2.21	1.06	1	1.15	1.13
531	GDB	3.28	2.14	3.62	2.23	3.84	2.45	1.1	1.04	1.17	1.15
532	HKR	3.24	2.12	3.49	2.15	3.71	2.37	1.08	1.02	1.15	1.12
533	HND	3.32	2.17	3.54	2.18	3.74	2.38	1.07	1	1.13	1.09
534	MET	3.38	2.2	3.65	2.23	3.84	2.43	1.08	1.01	1.13	1.1
536	HND	3.41	2.22	3.71	2.27	3.91	2.47	1.09	1.02	1.15	1.11
537	BVH	3.33	2.17	3.65	2.24	3.87	2.47	1.1	1.03	1.16	1.14
538	HND	3.49	2.28	3.82	2.34	4.02	2.55	1.09	1.03	1.15	1.12
539	PHS	3.31	2.16	3.64	2.23	3.85	2.46	1.1	1.04	1.16	1.14
540	KLM	3.25	2.12	3.56	2.19	3.77	2.41	1.09	1.03	1.16	1.14
543	EOR	3.57	2.33	3.92	2.4	4.12	2.62	1.1	1.03	1.16	1.12
545	IRM	3.5	2.29	3.86	2.37	4.07	2.59	1.1	1.03	1.16	1.13
547	DEL	3.5	2.3	3.84	2.36	4.05	2.58	1.09	1.03	1.16	1.12
548	BVH	3.39	2.21	3.73	2.29	3.96	2.53	1.1	1.03	1.17	1.14
549	FLU	3.32	2.17	3.66	2.25	3.9	2.5	1.1	1.04	1.17	1.15
551	FLU	3.34	2.18	3.67	2.26	3.91	2.51	1.1	1.03	1.17	1.15
553	ATL	3.33	2.19	3.62	2.23	3.87	2.47	1.09	1.02	1.16	1.13
554	ATL	3.5	2.3	3.69	2.26	3.95	2.51	1.06	0.98	1.13	1.09
555	CYG	3.33	2.17	3.72	2.3	3.97	2.55	1.12	1.06	1.19	1.18
558	DEL	3.6	2.37	3.86	2.35	4.11	2.6	1.07	0.99	1.14	1.1
559	ATL	3.5	2.33	3.33	2.04	3.61	2.31	0.95	0.87	1.03	0.99
561	ATL	3.4	2.26	3.33	2.05	3.61	2.31	0.98	0.91	1.06	1.02
562	BGH	3.57	2.36	3.62	2.21	3.89	2.46	1.01	0.94	1.09	1.04
563	BSK	3.35	2.21	3.59	2.21	3.85	2.45	1.07	1	1.15	1.11
564	LET	3.01	1.9	3.17	1.85	3.38	2.08	1.06	0.97	1.12	1.09
565	DEL	3.56	2.34	3.85	2.35	4.11	2.6	1.08	1	1.15	1.11
566	DEL	3.44	2.25	3.69	2.24	3.94	2.48	1.07	1	1.15	1.1
567	BSK	3.38	2.22	3.64	2.22	3.89	2.46	1.08	1	1.15	1.11
568	DEL	3.61	2.37	3.94	2.42	4.15	2.63	1.09	1.02	1.15	1.11
569	IRM	3.48	2.28	3.77	2.31	4	2.54	1.08	1.01	1.15	1.11
570	HAN	3.48	2.28	3.79	2.32	4.01	2.53	1.09	1.02	1.15	1.11
571	HAN	3.43	2.23	3.7	2.25	3.88	2.44	1.08	1.01	1.13	1.1
572	DVG	3.28	2.14	3.34	1.99	3.5	2.17	1.02	0.93	1.06	1.01
574	LET	3.28	2.14	3.54	2.16	3.79	2.39	1.08	1.01	1.16	1.11
575	WWT	3.14	2.04	3.34	2.02	3.56	2.24	1.06	0.99	1.14	1.1
576	DMH	3.34	2.18	3.59	2.19	3.8	2.39	1.07	1.01	1.14	1.1
577	BZR	3.19	2.07	3.29	1.94	3.46	2.13	1.03	0.94	1.09	1.03
578	HAN	3.38	2.19	3.59	2.19	3.77	2.37	1.06	1	1.12	1.08
579	LET	3.11	2.02	3.31	2	3.53	2.22	1.06	0.99	1.14	1.1
581	HKR	3.31	2.16	3.45	2.13	3.64	2.31	1.04	0.99	1.1	1.07

Appendix C-4a (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	3.44	2.23	3.66	2.24	3.82	2.41	1.06	1	1.11	1.08
583	HAN	3.39	2.2	3.58	2.19	3.75	2.37	1.06	1	1.11	1.08
584	DMH	3.48	2.26	3.77	2.3	3.95	2.49	1.08	1.02	1.14	1.1
589	HAN	3.43	2.23	3.63	2.22	3.79	2.39	1.06	1	1.1	1.07
590	CHN	3.41	2.21	3.6	2.17	3.63	2.27	1.05	0.98	1.06	1.03
591	BVL	3.38	2.18	3.51	2.12	3.6	2.26	1.04	0.97	1.07	1.04
592	FMT	3.34	2.14	3.45	2.08	3.59	2.25	1.03	0.97	1.08	1.05
593	CVD	3.36	2.16	3.48	2.1	3.61	2.27	1.03	0.97	1.07	1.05
595	ATP	3.29	2.1	3.49	2.08	3.66	2.29	1.06	0.99	1.11	1.09
596	FMT	3.24	2.07	3.47	2.06	3.63	2.26	1.07	1	1.12	1.1
598	FMT	3.23	2.06	3.46	2.06	3.63	2.26	1.07	1	1.12	1.1
599	MAB	3.28	2.09	3.39	2.03	3.58	2.23	1.04	0.97	1.09	1.06
600	CVD	3.25	2.07	3.43	2.05	3.62	2.25	1.06	0.99	1.11	1.08
601	MAB	3.35	2.15	3.38	2.05	3.54	2.23	1.01	0.95	1.06	1.04
602	MAB	3.3	2.11	3.37	2.03	3.55	2.22	1.02	0.96	1.07	1.05
603	MAB	3.15	2	3.29	1.95	3.47	2.15	1.04	0.98	1.1	1.08
605	HDY	3.21	2.05	3.3	1.97	3.48	2.17	1.03	0.96	1.08	1.06
606	CVD	3.31	2.12	3.26	1.96	3.45	2.17	0.98	0.92	1.04	1.02
607	CVD	3.31	2.13	3.28	1.98	3.48	2.19	0.99	0.93	1.05	1.03
608	MCT	3.25	2.09	3.31	2	3.53	2.21	1.02	0.95	1.09	1.06
609	TIY	3.25	2.08	3.31	1.98	3.51	2.19	1.02	0.95	1.08	1.05
610	BVL	3.13	1.99	3.22	1.92	3.41	2.12	1.03	0.96	1.09	1.07
611	HUK	3.26	2.08	3.35	2	3.55	2.22	1.03	0.96	1.09	1.06
613	CCL	3.22	2.08	3.35	2.03	3.59	2.25	1.04	0.97	1.11	1.08
615	CVD	3.06	1.93	3.2	1.89	3.39	2.09	1.05	0.98	1.11	1.08
616	CHN	3.13	1.97	3.3	1.96	3.5	2.16	1.06	0.99	1.12	1.1
617	FMT	3.2	2.03	3.42	2.03	3.63	2.24	1.07	1	1.14	1.11
618	CHN	3.23	2.05	3.44	2.05	3.65	2.26	1.07	1	1.13	1.1
619	FMT	3.21	2.04	3.44	2.04	3.63	2.25	1.07	1	1.13	1.1
620	MAB	3.24	2.07	3.43	2.04	3.62	2.25	1.06	0.99	1.11	1.09
621	TTH	3.17	2.02	3.31	1.98	3.53	2.19	1.04	0.98	1.11	1.09
622	TTH	3.19	2.03	3.32	1.98	3.53	2.2	1.04	0.97	1.11	1.08
623	ZRB	3.22	2.06	3.34	2	3.54	2.21	1.04	0.97	1.1	1.07
624	THA	3.14	2.01	3.21	1.93	3.44	2.15	1.02	0.96	1.09	1.07
626	SIL	3.46	2.23	3.64	2.17	3.78	2.35	1.05	0.97	1.09	1.06
627	MAB	3.38	2.17	3.56	2.12	3.72	2.31	1.05	0.98	1.1	1.07
628	BVL	3.31	2.11	3.5	2.08	3.67	2.28	1.06	0.99	1.11	1.08
629	SIL	3.34	2.13	3.53	2.1	3.7	2.29	1.06	0.99	1.11	1.08
631	MAB	3.22	2.03	3.45	2.04	3.64	2.24	1.07	1.01	1.13	1.11
632	MAB	3.13	1.96	3.38	1.99	3.57	2.19	1.08	1.01	1.14	1.12
633	MAB	3.1	1.95	3.33	1.95	3.52	2.16	1.07	1	1.13	1.11
634	MAB	3.23	2.04	3.45	2.04	3.62	2.23	1.07	1	1.12	1.1
635	MAB	3.18	2	3.41	2.01	3.59	2.21	1.07	1.01	1.13	1.11
637	MSN	3.1	1.95	3.33	1.95	3.52	2.16	1.07	1	1.14	1.11
638	ZRB	3.16	1.99	3.4	2	3.58	2.2	1.07	1.01	1.13	1.11
639	PUR	3.06	1.93	3.22	1.87	3.4	2.08	1.05	0.97	1.11	1.08
641	MAB	3.1	1.95	3.3	1.94	3.5	2.15	1.06	0.99	1.13	1.1
642	MAB	3.12	1.96	3.3	1.95	3.5	2.15	1.06	0.99	1.12	1.1
643	CHN	3.06	1.93	3.22	1.89	3.42	2.1	1.05	0.98	1.12	1.09
645	DLB	3.09	1.95	3.25	1.88	3.41	2.09	1.05	0.97	1.11	1.07
648	CFD	2.98	1.89	3.05	1.8	3.22	2	1.02	0.96	1.08	1.06
649	BVL	3.13	1.99	3.27	1.95	3.51	2.17	1.05	0.98	1.12	1.09
650	MAB	3.19	2.03	3.32	1.98	3.55	2.2	1.04	0.98	1.11	1.08
651	RDM	3.26	2.09	3.4	2.04	3.63	2.25	1.05	0.97	1.11	1.08
653	LET	3.09	1.99	3.23	1.93	3.44	2.15	1.05	0.97	1.11	1.08
654	PUY	3.22	2.08	3.36	2.04	3.59	2.25	1.04	0.98	1.12	1.08
655	DEL	3.32	2.17	3.45	2.08	3.67	2.3	1.04	0.96	1.11	1.06

Appendix C-4a (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	3.15	2.03	3.25	1.94	3.46	2.15	1.03	0.95	1.1	1.06
657	LET	3.08	1.97	3.19	1.88	3.4	2.1	1.03	0.95	1.1	1.06
658	CMY	3.04	1.94	3.1	1.82	3.31	2.05	1.02	0.94	1.09	1.06
659	DEL	3.39	2.21	3.47	2.09	3.7	2.31	1.03	0.95	1.09	1.04
660	CVD	3.24	2.08	3.34	2.01	3.56	2.23	1.03	0.97	1.1	1.07
661	RDM	3.2	2.05	3.34	1.99	3.56	2.21	1.04	0.97	1.11	1.08
663	LET	3.07	1.96	3.17	1.87	3.39	2.09	1.03	0.96	1.1	1.07
664	RDM	3.1	1.99	3.22	1.92	3.44	2.14	1.04	0.96	1.11	1.07
666	PUR	2.86	1.8	3	1.74	3.17	1.94	1.05	0.97	1.11	1.08
667	LET	3.09	1.95	3.24	1.89	3.43	2.11	1.05	0.97	1.11	1.08
669	LOB	3.25	2.16	3.2	1.98	3.47	2.24	0.99	0.92	1.07	1.04
671	PHS	3.29	2.16	3.48	2.14	3.74	2.4	1.06	0.99	1.14	1.11
672	PED	3.31	2.16	3.59	2.21	3.84	2.47	1.08	1.02	1.16	1.14
673	MMO	3.27	2.14	3.53	2.18	3.79	2.44	1.08	1.02	1.16	1.14
675	BTN	3.08	2.02	3.24	2.01	3.52	2.27	1.05	0.99	1.14	1.12
676	CYG	3.03	1.98	3.19	1.97	3.47	2.23	1.05	0.99	1.15	1.12
677	BEN	3.25	2.12	3.52	2.17	3.77	2.43	1.08	1.02	1.16	1.15
680	PNC	3.05	2.02	2.94	1.82	3.22	2.09	0.96	0.9	1.06	1.04
681	CYG	3.17	2.09	3.25	2.01	3.52	2.27	1.02	0.96	1.11	1.09
682	BEN	3.06	2.02	3.09	1.91	3.37	2.18	1.01	0.95	1.1	1.08
683	HUB	2.94	1.94	3.04	1.88	3.34	2.16	1.04	0.97	1.14	1.12
684	CAR	3	1.99	2.91	1.81	3.21	2.08	0.97	0.91	1.07	1.05
686	LOB	3.16	2.09	3.08	1.9	3.36	2.17	0.97	0.91	1.06	1.04
689	CAR	3.12	2.09	2.9	1.8	3.19	2.09	0.93	0.86	1.02	1
690	RMY	3.05	2.01	3.13	1.94	3.42	2.21	1.02	0.96	1.12	1.1
691	HUB	2.96	1.97	2.94	1.83	3.24	2.11	0.99	0.93	1.09	1.07
692	BTN	2.96	1.96	3.03	1.88	3.33	2.16	1.02	0.96	1.12	1.1
693	RMY	2.98	1.95	3.12	1.93	3.41	2.19	1.05	0.99	1.14	1.12
694	HUB	2.97	1.95	3.12	1.93	3.42	2.21	1.05	0.99	1.15	1.13
695	BTN	2.91	1.9	3.08	1.9	3.38	2.18	1.06	1	1.16	1.15
696	BTN	2.98	1.96	3.14	1.94	3.42	2.22	1.05	0.99	1.15	1.13
698	MYW	2.88	1.9	2.96	1.83	3.24	2.11	1.03	0.96	1.13	1.11
699	HUB	2.93	1.93	3.06	1.89	3.34	2.17	1.04	0.98	1.14	1.12
702	CVL	3.24	2.13	3.5	2.17	3.76	2.43	1.08	1.02	1.16	1.14
703	HGV	2.99	1.97	3.15	1.95	3.42	2.22	1.05	0.99	1.14	1.13
705	MCO	2.81	1.86	2.9	1.79	3.17	2.06	1.03	0.96	1.13	1.11
708	MLA	2.88	1.9	2.97	1.85	3.25	2.12	1.03	0.97	1.13	1.11
709	COA	2.89	1.92	3	1.87	3.28	2.14	1.04	0.98	1.14	1.12
710	COA	3.03	2	3.21	1.99	3.49	2.26	1.06	1	1.15	1.13
711	COA	2.91	1.93	3.04	1.89	3.32	2.17	1.04	0.98	1.14	1.12
715	KVG	2.95	1.95	3.1	1.93	3.39	2.2	1.05	0.99	1.15	1.13

Appendix C-4b: Annual wheat residue (t/ha) from wheat-fallow averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	1.13	0.22	1.19	0.18	1.16	0.39	1.05	0.79	1.03	1.76
3	DON	1.2	0.23	1.27	0.19	1.24	0.41	1.06	0.82	1.04	1.73
4	HZM	1.2	0.23	1.27	0.19	1.24	0.4	1.06	0.83	1.03	1.76
5	DON	1.23	0.23	1.31	0.2	1.27	0.41	1.07	0.85	1.04	1.77
6	ESH	1.25	0.24	1.33	0.2	1.31	0.42	1.06	0.84	1.04	1.72
7	COS	1.17	0.23	1.24	0.19	1.21	0.4	1.06	0.81	1.03	1.76
9	BBN	1.3	0.24	1.4	0.21	1.35	0.42	1.08	0.87	1.04	1.73
10	BBN	1.39	0.25	1.52	0.23	1.45	0.44	1.1	0.91	1.05	1.72
11	ESH	1.39	0.25	1.52	0.23	1.46	0.44	1.09	0.91	1.05	1.75
13	HZM	1.33	0.25	1.43	0.21	1.36	0.42	1.07	0.86	1.02	1.7
14	COS	1.36	0.25	1.48	0.22	1.41	0.43	1.09	0.9	1.04	1.72
15	ABT	1.38	0.25	1.5	0.23	1.42	0.43	1.09	0.89	1.03	1.7
19	HZM	1.39	0.25	1.51	0.23	1.43	0.43	1.09	0.91	1.03	1.71
20	LAD	1.4	0.25	1.53	0.23	1.44	0.43	1.09	0.9	1.03	1.71
22	COS	1.4	0.25	1.51	0.22	1.41	0.43	1.08	0.88	1.01	1.68
27	DON	1.27	0.23	1.33	0.2	1.24	0.41	1.05	0.85	0.98	1.74
28	HZM	1.21	0.23	1.28	0.19	1.24	0.41	1.06	0.82	1.03	1.74
32	HRT	1.42	0.25	1.55	0.23	1.45	0.43	1.09	0.9	1.02	1.71
33	HRT	1.41	0.25	1.54	0.23	1.44	0.43	1.09	0.9	1.02	1.72
36	COS	1.37	0.24	1.47	0.22	1.38	0.42	1.08	0.89	1.01	1.74
47	DON	1.34	0.24	1.44	0.22	1.38	0.43	1.08	0.89	1.03	1.75
48	DON	1.38	0.25	1.5	0.22	1.42	0.43	1.09	0.9	1.03	1.73
49	TAG	1.39	0.25	1.52	0.23	1.44	0.43	1.09	0.9	1.03	1.73
51	SAD	1.43	0.26	1.58	0.24	1.5	0.45	1.1	0.92	1.05	1.72
52	VVW	1.41	0.25	1.54	0.23	1.45	0.43	1.09	0.92	1.03	1.73
53	TAG	1.4	0.25	1.53	0.22	1.43	0.43	1.09	0.9	1.02	1.72
54	ESH	1.43	0.26	1.58	0.24	1.51	0.45	1.11	0.92	1.06	1.73
56	ZBR	1.36	0.26	1.45	0.23	1.42	0.44	1.07	0.88	1.04	1.69
59	FAL	1.33	0.25	1.42	0.22	1.39	0.43	1.07	0.88	1.05	1.74
60	BBN	1.36	0.25	1.45	0.22	1.43	0.44	1.07	0.88	1.05	1.75
61	RYF	1.39	0.25	1.53	0.23	1.47	0.44	1.1	0.91	1.05	1.74
62	DVS	1.21	0.22	1.3	0.2	1.27	0.4	1.07	0.89	1.05	1.81
64	JUH	1.29	0.24	1.38	0.21	1.36	0.42	1.07	0.89	1.05	1.76
68	HRT	1.27	0.23	1.37	0.21	1.33	0.42	1.08	0.9	1.05	1.79
70	JUH	1.35	0.24	1.47	0.22	1.42	0.43	1.09	0.92	1.05	1.8
71	BBN	1.39	0.25	1.52	0.23	1.46	0.44	1.1	0.91	1.05	1.76
72	BLY	1.38	0.25	1.52	0.23	1.46	0.44	1.1	0.91	1.05	1.75
73	RYF	1.37	0.25	1.49	0.22	1.44	0.44	1.09	0.9	1.05	1.77
74	JUH	1.42	0.25	1.56	0.23	1.5	0.45	1.1	0.93	1.06	1.8
75	DIG	1.34	0.26	1.43	0.23	1.41	0.44	1.07	0.88	1.05	1.71
76	JUH	1.35	0.24	1.46	0.22	1.42	0.43	1.08	0.9	1.06	1.77
77	LAD	1.38	0.25	1.49	0.23	1.45	0.44	1.08	0.91	1.06	1.76
78	ABT	1.36	0.25	1.46	0.23	1.43	0.44	1.08	0.91	1.06	1.76
80	BWY	1.35	0.26	1.44	0.22	1.43	0.44	1.07	0.86	1.06	1.71
81	HZM	1.36	0.26	1.45	0.23	1.44	0.44	1.07	0.89	1.06	1.7
83	BUD	1.38	0.26	1.47	0.23	1.46	0.44	1.07	0.87	1.06	1.67
84	HZM	1.38	0.27	1.48	0.23	1.47	0.45	1.07	0.87	1.06	1.67
87	NPA	1.32	0.26	1.41	0.22	1.39	0.44	1.06	0.85	1.05	1.67
88	FAL	1.33	0.26	1.41	0.22	1.4	0.44	1.06	0.85	1.05	1.66
89	JUH	1.18	0.23	1.24	0.19	1.22	0.4	1.05	0.8	1.04	1.73
91	HZM	1.3	0.26	1.37	0.21	1.36	0.43	1.06	0.82	1.05	1.66
93	DON	1.31	0.27	1.39	0.22	1.37	0.44	1.06	0.83	1.05	1.65
94	HRT	1.34	0.26	1.44	0.23	1.42	0.44	1.07	0.88	1.05	1.69
97	FAL	1.4	0.26	1.51	0.23	1.49	0.44	1.08	0.87	1.06	1.68
98	HZM	1.47	0.29	1.58	0.25	1.58	0.46	1.08	0.87	1.07	1.62

Appendix C-4b (Continued):

Poly #	Soil name	BL		$SN_\uparrow$		$SN_\downarrow$		$SN_\uparrow$/BL		$SN_\downarrow$/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	1.58	0.3	1.72	0.26	1.71	0.47	1.09	0.86	1.08	1.56
101	FAL	1.38	0.26	1.49	0.23	1.47	0.44	1.07	0.87	1.06	1.68
102	WHW	1.42	0.27	1.52	0.23	1.52	0.45	1.07	0.86	1.07	1.65
103	ABT	1.43	0.28	1.54	0.24	1.54	0.45	1.08	0.88	1.07	1.64
104	HZM	1.46	0.28	1.58	0.25	1.57	0.46	1.08	0.88	1.08	1.62
105	CTE	1.54	0.3	1.68	0.26	1.67	0.47	1.09	0.88	1.08	1.59
107	ALC	1.36	0.27	1.46	0.23	1.45	0.44	1.07	0.87	1.06	1.66
108	HZM	1.46	0.29	1.58	0.25	1.57	0.46	1.08	0.89	1.08	1.61
109	PRV	1.48	0.29	1.6	0.26	1.6	0.47	1.08	0.89	1.08	1.6
110	CTE	1.59	0.31	1.74	0.27	1.74	0.48	1.09	0.88	1.09	1.56
112	ALC	1.51	0.29	1.64	0.26	1.63	0.47	1.09	0.89	1.08	1.6
130	DVS	1.21	0.26	1.24	0.22	1.26	0.44	1.03	0.85	1.04	1.72
132	CTE	1.19	0.26	1.21	0.22	1.22	0.44	1.01	0.85	1.02	1.7
133	BBN	1.35	0.26	1.45	0.22	1.43	0.44	1.07	0.86	1.05	1.7
135	DVS	1.34	0.25	1.43	0.22	1.41	0.43	1.07	0.88	1.05	1.73
144	BBN	1.14	0.23	1.16	0.18	1.13	0.4	1.02	0.8	0.99	1.76
170	HUB	1.17	0.24	1.19	0.19	1.18	0.41	1.02	0.79	1.01	1.7
171	HUB	1.16	0.23	1.21	0.19	1.19	0.41	1.04	0.82	1.03	1.78
172	KTH	1.17	0.23	1.22	0.19	1.19	0.41	1.05	0.83	1.02	1.79
173	CUL	1.16	0.23	1.22	0.19	1.2	0.41	1.05	0.83	1.03	1.79
176	HRT	1.17	0.21	1.21	0.18	1.15	0.39	1.04	0.85	0.99	1.86
177	HRT	1.18	0.22	1.24	0.19	1.19	0.41	1.05	0.85	1.01	1.82
178	HPE	1.24	0.23	1.31	0.2	1.23	0.41	1.06	0.86	0.99	1.81
180	KNZ	1.2	0.23	1.26	0.19	1.19	0.41	1.05	0.84	0.99	1.8
181	COS	1.15	0.22	1.21	0.19	1.14	0.41	1.05	0.86	0.99	1.85
182	ATO	1.28	0.23	1.35	0.2	1.27	0.42	1.06	0.86	0.99	1.78
185	UCS	1.27	0.23	1.34	0.2	1.26	0.41	1.06	0.86	0.99	1.79
189	CUL	1.17	0.21	1.22	0.18	1.16	0.4	1.04	0.85	0.99	1.85
192	COA	1.17	0.22	1.22	0.18	1.17	0.4	1.04	0.83	1	1.82
193	MLA	1.16	0.22	1.22	0.18	1.18	0.4	1.05	0.84	1.01	1.85
194	MLA	1.22	0.22	1.28	0.19	1.21	0.4	1.05	0.85	0.99	1.83
196	LNN	1.35	0.24	1.44	0.21	1.33	0.42	1.07	0.87	0.99	1.76
197	COA	1.24	0.22	1.3	0.19	1.23	0.41	1.05	0.85	0.99	1.86
198	COA	1.19	0.21	1.24	0.18	1.17	0.4	1.04	0.85	0.99	1.87
201	HRT	1.16	0.23	1.23	0.19	1.2	0.41	1.06	0.83	1.03	1.78
211	ZOR	1.13	0.22	1.18	0.19	1.11	0.4	1.05	0.86	0.98	1.82
212	ABC	1.13	0.22	1.18	0.19	1.11	0.4	1.04	0.86	0.98	1.82
215	ABC	1.14	0.22	1.19	0.19	1.12	0.4	1.04	0.86	0.98	1.83
218	KNZ	1.17	0.22	1.22	0.19	1.14	0.4	1.04	0.86	0.97	1.87
221	EGL	1.12	0.22	1.17	0.19	1.1	0.4	1.04	0.86	0.98	1.82
224	ABC	1.13	0.22	1.18	0.19	1.1	0.4	1.04	0.86	0.97	1.83
227	TNW	1.16	0.21	1.2	0.18	1.12	0.4	1.04	0.86	0.97	1.88
231	ABC	1.19	0.22	1.24	0.19	1.16	0.4	1.05	0.86	0.97	1.85
232	MLA	1.15	0.21	1.18	0.18	1.1	0.4	1.03	0.86	0.96	1.89
233	KNZ	1.14	0.21	1.18	0.18	1.1	0.4	1.04	0.86	0.97	1.88
236	ABC	1.14	0.22	1.19	0.19	1.11	0.4	1.04	0.87	0.97	1.83
240	KNZ	1.17	0.22	1.22	0.19	1.14	0.4	1.04	0.86	0.97	1.83
246	GDI	1.16	0.22	1.21	0.19	1.14	0.41	1.05	0.87	0.98	1.84
248	GDI	1.17	0.23	1.24	0.2	1.16	0.41	1.06	0.86	0.99	1.8
250	ABC	1.22	0.23	1.31	0.2	1.22	0.42	1.07	0.85	1	1.77
252	UCS	1.25	0.23	1.32	0.2	1.23	0.41	1.06	0.87	0.99	1.8
253	COD	1.28	0.23	1.36	0.2	1.27	0.42	1.06	0.87	0.99	1.78
254	PIB	1.34	0.24	1.42	0.21	1.32	0.42	1.07	0.87	0.99	1.78
258	POK	1.41	0.24	1.53	0.21	1.45	0.43	1.08	0.86	1.02	1.78
259	RDW	1.32	0.23	1.41	0.2	1.32	0.42	1.07	0.86	1	1.81
261	NIT	1.3	0.23	1.39	0.2	1.31	0.42	1.07	0.86	1	1.8
264	COA	1.23	0.22	1.31	0.19	1.22	0.41	1.07	0.86	0.99	1.84

Appendix C-4b (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	1.21	0.22	1.28	0.19	1.19	0.41	1.05	0.86	0.98	1.84
271	FLU	1.43	0.25	1.52	0.21	1.42	0.43	1.07	0.86	1	1.73
275	RDW	1.46	0.26	1.57	0.22	1.47	0.43	1.07	0.86	1.01	1.68
279	ABC	1.33	0.25	1.43	0.21	1.34	0.43	1.08	0.85	1.01	1.72
290	ABC	1.15	0.22	1.21	0.19	1.14	0.41	1.05	0.86	0.99	1.82
291	LCY	1.18	0.23	1.25	0.2	1.18	0.42	1.06	0.87	1	1.81
292	TMN	1.19	0.23	1.27	0.2	1.21	0.42	1.07	0.87	1.02	1.83
296	NIT	1.2	0.24	1.28	0.2	1.21	0.43	1.07	0.83	1.01	1.78
297	GOG	1.2	0.24	1.29	0.2	1.21	0.42	1.07	0.85	1.01	1.78
301	SDN	1.24	0.24	1.33	0.21	1.26	0.43	1.08	0.85	1.02	1.77
302	LCY	1.24	0.24	1.34	0.21	1.28	0.43	1.08	0.85	1.03	1.77
306	LCY	1.25	0.24	1.36	0.2	1.28	0.42	1.09	0.85	1.02	1.74
310	FRY	1.47	0.27	1.63	0.23	1.57	0.45	1.11	0.87	1.07	1.67
311	FRY	1.44	0.26	1.56	0.22	1.47	0.44	1.09	0.86	1.02	1.68
312	FRY	1.45	0.26	1.59	0.23	1.51	0.44	1.1	0.86	1.05	1.68
315	NTW	1.2	0.23	1.29	0.2	1.24	0.42	1.07	0.86	1.03	1.8
316	LCY	1.21	0.23	1.3	0.2	1.26	0.42	1.08	0.86	1.04	1.81
317	LCY	1.21	0.24	1.3	0.2	1.24	0.42	1.07	0.85	1.03	1.78
320	FRY	1.22	0.24	1.31	0.2	1.26	0.42	1.08	0.85	1.03	1.8
322	LCY	1.24	0.24	1.34	0.2	1.3	0.42	1.08	0.86	1.05	1.8
323	LCY	1.26	0.24	1.36	0.21	1.32	0.43	1.09	0.87	1.05	1.79
325	LCY	1.29	0.24	1.4	0.21	1.35	0.43	1.09	0.86	1.05	1.76
326	LCY	1.29	0.25	1.41	0.21	1.35	0.43	1.09	0.85	1.04	1.74
334	LCY	1.53	0.28	1.71	0.24	1.66	0.45	1.12	0.87	1.09	1.64
335	FRY	1.32	0.25	1.45	0.21	1.4	0.43	1.1	0.86	1.06	1.74
337	MGS	1.47	0.27	1.61	0.23	1.56	0.45	1.1	0.84	1.06	1.65
339	LFN	1.49	0.27	1.63	0.23	1.58	0.45	1.1	0.84	1.06	1.65
341	MGS	1.42	0.26	1.57	0.23	1.52	0.44	1.1	0.86	1.07	1.68
342	LFN	1.49	0.27	1.67	0.23	1.62	0.45	1.12	0.86	1.09	1.65
343	FRY	1.54	0.28	1.74	0.24	1.69	0.45	1.13	0.86	1.09	1.62
344	BSU	1.54	0.28	1.71	0.24	1.65	0.45	1.11	0.86	1.07	1.62
345	SDN	1.56	0.28	1.74	0.24	1.67	0.45	1.11	0.86	1.07	1.61
346	PHS	1.55	0.28	1.73	0.24	1.67	0.45	1.12	0.86	1.08	1.62
347	SDN	1.56	0.27	1.72	0.24	1.64	0.45	1.11	0.88	1.06	1.65
348	SDN	1.55	0.27	1.73	0.24	1.66	0.45	1.11	0.88	1.07	1.64
350	LFN	1.51	0.26	1.64	0.23	1.54	0.44	1.09	0.9	1.02	1.71
351	LFN	1.54	0.27	1.7	0.24	1.61	0.45	1.1	0.88	1.04	1.66
352	RDW	1.54	0.27	1.68	0.24	1.59	0.45	1.09	0.88	1.03	1.67
354	BVH	1.57	0.28	1.72	0.24	1.67	0.46	1.1	0.83	1.06	1.61
356	EOR	1.54	0.28	1.71	0.23	1.66	0.45	1.11	0.83	1.07	1.64
357	EOR	1.55	0.28	1.71	0.23	1.65	0.45	1.11	0.84	1.07	1.62
359	RED	1.55	0.28	1.74	0.23	1.67	0.45	1.12	0.83	1.08	1.63
360	EOR	1.56	0.28	1.74	0.23	1.67	0.45	1.12	0.85	1.07	1.63
362	EOR	1.5	0.26	1.65	0.22	1.55	0.43	1.1	0.88	1.04	1.7
363	EOR	1.48	0.25	1.62	0.22	1.52	0.43	1.1	0.88	1.03	1.7
364	EOR	1.52	0.25	1.68	0.22	1.6	0.42	1.1	0.85	1.05	1.65
365	HND	1.48	0.25	1.62	0.21	1.54	0.42	1.09	0.85	1.04	1.68
366	DCY	1.47	0.25	1.61	0.21	1.53	0.43	1.09	0.85	1.04	1.7
367	HND	1.48	0.26	1.62	0.22	1.54	0.43	1.1	0.85	1.04	1.69
370	HND	1.38	0.25	1.45	0.2	1.39	0.43	1.05	0.81	1.01	1.73
371	WWT	1.39	0.25	1.51	0.21	1.44	0.43	1.08	0.83	1.04	1.73
372	EOR	1.5	0.27	1.66	0.22	1.59	0.44	1.11	0.83	1.06	1.68
374	EOR	1.5	0.27	1.66	0.22	1.6	0.45	1.11	0.83	1.07	1.67
375	WWT	1.42	0.26	1.57	0.21	1.51	0.44	1.1	0.83	1.06	1.71
376	HND	1.33	0.24	1.45	0.2	1.39	0.42	1.09	0.84	1.04	1.78
378	HND	1.25	0.22	1.34	0.19	1.29	0.41	1.07	0.85	1.03	1.83
392	AGS	1.63	0.28	1.76	0.24	1.66	0.45	1.08	0.88	1.02	1.62

Appendix C-4b (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	1.78	0.29	1.87	0.25	1.74	0.45	1.05	0.87	0.98	1.56
396	AGS	1.56	0.26	1.65	0.22	1.55	0.43	1.06	0.86	0.99	1.69
401	MGS	1.56	0.26	1.71	0.22	1.64	0.44	1.1	0.85	1.05	1.72
403	CMO	1.84	0.29	1.92	0.25	1.78	0.45	1.04	0.87	0.97	1.55
404	AGS	1.9	0.3	1.99	0.27	1.84	0.46	1.05	0.87	0.97	1.51
405	CMO	1.73	0.29	1.85	0.25	1.73	0.45	1.07	0.88	1	1.59
408	AGS	1.74	0.28	1.82	0.24	1.7	0.44	1.05	0.88	0.98	1.6
409	AGS	1.73	0.27	1.78	0.23	1.64	0.44	1.03	0.85	0.95	1.6
410	UCS	1.69	0.27	1.76	0.23	1.65	0.44	1.05	0.87	0.98	1.63
411	COA	1.38	0.23	1.45	0.19	1.35	0.41	1.05	0.86	0.98	1.81
412	CMO	1.61	0.26	1.68	0.23	1.55	0.43	1.05	0.87	0.97	1.66
416	WKN	1.55	0.25	1.7	0.21	1.64	0.44	1.1	0.85	1.06	1.74
418	MMO	1.32	0.23	1.4	0.19	1.33	0.42	1.06	0.85	1	1.83
420	TBY	1.23	0.21	1.29	0.18	1.21	0.41	1.05	0.85	0.98	1.89
421	HND	1.39	0.25	1.49	0.2	1.42	0.42	1.07	0.81	1.02	1.73
422	HCH	1.33	0.24	1.41	0.2	1.35	0.42	1.05	0.82	1.01	1.76
423	LET	1.26	0.23	1.32	0.19	1.28	0.41	1.05	0.83	1.02	1.8
425	HND	1.38	0.24	1.47	0.2	1.41	0.42	1.07	0.83	1.03	1.76
426	MMO	1.42	0.23	1.49	0.2	1.41	0.42	1.05	0.84	0.99	1.78
428	HND	1.3	0.23	1.38	0.19	1.34	0.42	1.06	0.83	1.03	1.85
429	FLU	1.33	0.22	1.39	0.19	1.29	0.4	1.04	0.85	0.97	1.83
430	MCO	1.52	0.25	1.57	0.21	1.45	0.42	1.03	0.85	0.96	1.71
431	AGS	1.64	0.26	1.68	0.22	1.55	0.43	1.02	0.84	0.94	1.65
432	KVG	1.4	0.23	1.46	0.2	1.37	0.41	1.04	0.85	0.98	1.78
433	POK	1.37	0.23	1.4	0.19	1.33	0.41	1.02	0.82	0.97	1.78
435	BTN	1.26	0.21	1.34	0.19	1.28	0.4	1.06	0.89	1.02	1.93
437	POK	1.46	0.24	1.51	0.2	1.42	0.42	1.04	0.86	0.97	1.76
439	COA	1.6	0.26	1.67	0.22	1.56	0.43	1.04	0.86	0.97	1.67
440	COA	1.24	0.21	1.28	0.18	1.21	0.4	1.03	0.83	0.98	1.9
441	MMO	1.39	0.23	1.47	0.2	1.39	0.42	1.06	0.84	1	1.8
442	WTB	1.4	0.24	1.42	0.19	1.34	0.41	1.01	0.8	0.96	1.74
443	HND	1.39	0.24	1.49	0.2	1.43	0.42	1.07	0.83	1.02	1.74
444	MET	1.4	0.24	1.51	0.2	1.43	0.41	1.08	0.82	1.02	1.71
449	KUR	1.25	0.21	1.29	0.18	1.27	0.41	1.04	0.84	1.02	1.89
451	MET	1.26	0.21	1.32	0.18	1.32	0.4	1.05	0.84	1.05	1.95
452	LET	1.23	0.21	1.28	0.17	1.27	0.4	1.04	0.82	1.03	1.92
453	CHN	1.28	0.21	1.37	0.18	1.36	0.41	1.07	0.86	1.06	1.95
457	MAB	1.31	0.21	1.42	0.17	1.4	0.41	1.08	0.85	1.07	1.97
458	MAB	1.33	0.2	1.43	0.17	1.41	0.4	1.08	0.85	1.06	2
460	WDN	1.32	0.2	1.43	0.17	1.41	0.4	1.08	0.84	1.07	1.98
461	BVL	1.31	0.21	1.41	0.18	1.4	0.4	1.07	0.85	1.07	1.94
463	HND	1.31	0.21	1.42	0.18	1.42	0.41	1.09	0.86	1.08	1.95
466	HND	1.25	0.21	1.31	0.17	1.3	0.4	1.05	0.84	1.04	1.94
467	WWT	1.23	0.21	1.28	0.18	1.26	0.4	1.04	0.84	1.03	1.94
471	HUK	1.27	0.21	1.33	0.18	1.31	0.41	1.05	0.85	1.04	1.95
472	MAB	1.33	0.2	1.42	0.17	1.4	0.4	1.07	0.84	1.05	1.98
473	HND	1.3	0.21	1.37	0.18	1.35	0.41	1.06	0.86	1.05	1.94
474	MAB	1.31	0.2	1.4	0.17	1.38	0.4	1.06	0.83	1.05	1.96
475	BVL	1.31	0.21	1.38	0.17	1.35	0.4	1.05	0.83	1.03	1.94
476	MAB	1.32	0.21	1.4	0.17	1.37	0.4	1.06	0.81	1.04	1.9
478	CCL	1.3	0.21	1.35	0.18	1.33	0.4	1.04	0.85	1.02	1.91
480	HUK	1.25	0.21	1.31	0.17	1.31	0.41	1.05	0.83	1.05	1.97
481	YTW	1.23	0.21	1.3	0.17	1.31	0.42	1.06	0.82	1.06	1.99
484	WWT	1.31	0.23	1.39	0.19	1.35	0.41	1.06	0.82	1.03	1.82
486	YTW	1.29	0.22	1.35	0.18	1.33	0.41	1.05	0.83	1.03	1.89
487	HUK	1.3	0.2	1.36	0.17	1.33	0.4	1.05	0.82	1.02	1.94
489	HUK	1.3	0.21	1.35	0.17	1.31	0.4	1.04	0.83	1.01	1.92

Appendix C-4b (Continued):

Poly #	Soil name	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	1.34	0.23	1.42	0.19	1.35	0.41	1.06	0.82	1.01	1.76
496	MET	1.3	0.21	1.36	0.18	1.32	0.4	1.04	0.83	1.01	1.9
499	CVD	1.24	0.19	1.25	0.15	1.21	0.38	1	0.77	0.97	1.99
508	AGS	1.6	0.26	1.67	0.22	1.53	0.43	1.04	0.86	0.96	1.66
509	PHS	1.43	0.23	1.49	0.2	1.4	0.42	1.04	0.86	0.98	1.78
510	AGS	1.48	0.24	1.57	0.21	1.44	0.42	1.06	0.86	0.97	1.72
512	BVH	1.47	0.24	1.56	0.21	1.44	0.42	1.06	0.86	0.98	1.71
513	AGS	1.58	0.25	1.65	0.22	1.52	0.43	1.05	0.86	0.96	1.67
514	PHS	1.45	0.25	1.55	0.21	1.43	0.42	1.07	0.84	0.99	1.7
515	BVH	1.45	0.25	1.56	0.2	1.43	0.42	1.08	0.81	0.99	1.68
516	BVH	1.43	0.24	1.51	0.21	1.41	0.42	1.06	0.85	0.99	1.73
517	FLU	1.45	0.25	1.52	0.22	1.42	0.42	1.05	0.87	0.98	1.7
518	MGS	1.39	0.24	1.46	0.2	1.38	0.41	1.05	0.86	0.99	1.76
519	NVR	1.68	0.27	1.73	0.23	1.58	0.43	1.03	0.85	0.94	1.62
520	AGS	1.54	0.25	1.6	0.21	1.49	0.42	1.04	0.86	0.96	1.69
521	POK	1.34	0.23	1.42	0.2	1.34	0.41	1.05	0.87	1	1.82
523	PED	1.35	0.23	1.42	0.2	1.35	0.41	1.05	0.85	1	1.79
524	FLU	1.24	0.22	1.32	0.19	1.27	0.4	1.06	0.86	1.02	1.86
531	GDB	1.41	0.23	1.51	0.2	1.41	0.41	1.07	0.85	1	1.76
532	HKR	1.35	0.23	1.44	0.19	1.37	0.41	1.06	0.82	1.01	1.77
533	HND	1.38	0.23	1.46	0.19	1.39	0.41	1.06	0.83	1.01	1.77
534	MET	1.42	0.23	1.51	0.19	1.44	0.41	1.07	0.82	1.01	1.76
536	HND	1.44	0.24	1.54	0.19	1.45	0.41	1.07	0.8	1.01	1.72
537	BVH	1.41	0.24	1.5	0.2	1.4	0.41	1.07	0.82	0.99	1.74
538	HND	1.48	0.25	1.56	0.2	1.47	0.41	1.06	0.81	0.99	1.66
539	PHS	1.4	0.24	1.5	0.2	1.39	0.41	1.07	0.83	0.99	1.73
540	KLM	1.37	0.23	1.46	0.19	1.36	0.41	1.06	0.83	0.99	1.76
543	EOR	1.52	0.25	1.59	0.2	1.49	0.42	1.05	0.8	0.98	1.63
545	IRM	1.49	0.25	1.58	0.2	1.46	0.42	1.06	0.81	0.98	1.66
547	DEL	1.48	0.25	1.55	0.2	1.45	0.41	1.04	0.81	0.98	1.65
548	BVH	1.44	0.24	1.53	0.2	1.42	0.42	1.06	0.82	0.99	1.71
549	FLU	1.41	0.24	1.5	0.2	1.4	0.42	1.06	0.83	0.99	1.73
551	FLU	1.41	0.24	1.48	0.2	1.39	0.42	1.05	0.83	0.99	1.74
553	ATL	1.4	0.24	1.46	0.19	1.39	0.41	1.04	0.82	0.99	1.72
554	ATL	1.47	0.25	1.51	0.2	1.43	0.42	1.03	0.78	0.97	1.67
555	CYG	1.42	0.24	1.47	0.21	1.39	0.43	1.03	0.86	0.98	1.78
558	DEL	1.53	0.26	1.59	0.2	1.5	0.42	1.04	0.77	0.97	1.62
559	ATL	1.39	0.26	1.38	0.18	1.31	0.43	0.99	0.68	0.94	1.64
561	ATL	1.35	0.25	1.35	0.18	1.28	0.41	1	0.73	0.95	1.66
562	BGH	1.47	0.26	1.5	0.19	1.41	0.42	1.02	0.73	0.96	1.6
563	BSK	1.4	0.24	1.46	0.19	1.38	0.41	1.04	0.8	0.99	1.71
564	LET	1.21	0.19	1.26	0.14	1.2	0.37	1.04	0.74	0.99	1.96
565	DEL	1.53	0.26	1.6	0.2	1.5	0.42	1.05	0.79	0.98	1.64
566	DEL	1.47	0.24	1.55	0.19	1.46	0.41	1.06	0.78	1	1.67
567	BSK	1.44	0.24	1.51	0.19	1.43	0.41	1.05	0.81	1	1.71
568	DEL	1.53	0.26	1.58	0.21	1.49	0.41	1.03	0.8	0.97	1.6
569	IRM	1.47	0.25	1.54	0.2	1.45	0.41	1.04	0.81	0.99	1.66
570	HAN	1.48	0.25	1.55	0.2	1.48	0.41	1.05	0.81	1	1.65
571	HAN	1.44	0.23	1.54	0.19	1.47	0.41	1.07	0.81	1.02	1.76
572	DVG	1.29	0.22	1.34	0.16	1.26	0.36	1.04	0.71	0.98	1.61
574	LET	1.4	0.23	1.49	0.19	1.43	0.4	1.06	0.82	1.02	1.72
575	WWT	1.31	0.21	1.4	0.17	1.34	0.39	1.07	0.81	1.02	1.82
576	DMH	1.41	0.23	1.5	0.19	1.44	0.4	1.06	0.83	1.02	1.75
577	BZR	1.26	0.21	1.31	0.15	1.24	0.36	1.03	0.71	0.98	1.67
578	HAN	1.4	0.22	1.5	0.18	1.44	0.4	1.07	0.83	1.03	1.82
579	LET	1.3	0.21	1.4	0.17	1.34	0.39	1.07	0.82	1.03	1.84
581	HKR	1.35	0.22	1.42	0.18	1.36	0.4	1.05	0.83	1.01	1.8

Appendix C-4b (Continued):

Poly #	Soil name	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	1.42	0.23	1.51	0.19	1.44	0.41	1.06	0.82	1.01	1.78
583	HAN	1.39	0.22	1.48	0.18	1.41	0.4	1.06	0.81	1.01	1.78
584	DMH	1.47	0.24	1.56	0.19	1.48	0.41	1.06	0.81	1.01	1.73
589	HAN	1.41	0.22	1.5	0.18	1.43	0.4	1.06	0.82	1.01	1.81
590	CHN	1.35	0.19	1.47	0.16	1.44	0.39	1.09	0.84	1.06	2.06
591	BVL	1.33	0.2	1.44	0.16	1.41	0.4	1.08	0.82	1.06	2.02
592	FMT	1.32	0.2	1.43	0.16	1.4	0.4	1.08	0.82	1.06	2.04
593	CVD	1.33	0.2	1.44	0.16	1.41	0.4	1.08	0.83	1.06	2.03
595	ATP	1.32	0.19	1.45	0.16	1.45	0.41	1.1	0.84	1.1	2.14
596	FMT	1.31	0.19	1.45	0.16	1.41	0.39	1.11	0.84	1.08	2.08
598	FMT	1.31	0.19	1.45	0.16	1.41	0.39	1.11	0.84	1.08	2.07
599	MAB	1.3	0.19	1.41	0.16	1.37	0.39	1.09	0.84	1.06	2.05
600	CVD	1.3	0.19	1.43	0.16	1.39	0.39	1.1	0.84	1.06	2.05
601	MAB	1.3	0.2	1.4	0.16	1.36	0.39	1.07	0.8	1.04	1.96
602	MAB	1.29	0.19	1.4	0.16	1.35	0.39	1.08	0.83	1.05	2.02
603	MAB	1.25	0.19	1.36	0.15	1.31	0.38	1.09	0.81	1.05	2.04
605	HDY	1.26	0.19	1.36	0.16	1.3	0.38	1.08	0.82	1.04	2.03
606	CVD	1.26	0.19	1.31	0.15	1.26	0.38	1.04	0.81	1	2.01
607	CVD	1.28	0.2	1.33	0.16	1.29	0.39	1.04	0.8	1.01	1.95
608	MCT	1.29	0.2	1.38	0.17	1.33	0.39	1.07	0.82	1.03	1.93
609	TIY	1.26	0.19	1.36	0.16	1.29	0.38	1.08	0.83	1.03	2
610	BVL	1.24	0.19	1.34	0.15	1.28	0.38	1.08	0.8	1.03	2.03
611	HUK	1.3	0.2	1.39	0.16	1.33	0.39	1.07	0.81	1.03	1.97
613	CCL	1.31	0.21	1.43	0.17	1.38	0.4	1.09	0.83	1.05	1.9
615	CVD	1.22	0.18	1.32	0.14	1.28	0.37	1.08	0.79	1.05	2.06
616	CHN	1.25	0.18	1.38	0.15	1.34	0.38	1.1	0.82	1.07	2.07
617	FMT	1.28	0.19	1.43	0.16	1.38	0.39	1.11	0.83	1.07	2.02
618	CHN	1.3	0.19	1.44	0.16	1.39	0.39	1.11	0.84	1.07	2.04
619	FMT	1.3	0.19	1.45	0.16	1.39	0.39	1.11	0.84	1.07	2.05
620	MAB	1.32	0.2	1.45	0.16	1.41	0.39	1.1	0.84	1.07	2
621	TTH	1.28	0.19	1.41	0.16	1.37	0.39	1.1	0.84	1.07	2.03
622	TTH	1.29	0.19	1.42	0.16	1.38	0.39	1.1	0.84	1.06	2.01
623	ZRB	1.31	0.2	1.44	0.17	1.4	0.39	1.09	0.84	1.06	1.96
624	THA	1.28	0.19	1.4	0.16	1.35	0.38	1.09	0.84	1.06	2.01
626	SIL	1.42	0.23	1.55	0.19	1.52	0.42	1.1	0.83	1.07	1.85
627	MAB	1.38	0.22	1.52	0.18	1.48	0.41	1.1	0.84	1.07	1.89
628	BVL	1.36	0.21	1.49	0.17	1.44	0.4	1.1	0.82	1.06	1.92
629	SIL	1.37	0.21	1.5	0.17	1.46	0.4	1.1	0.83	1.07	1.91
631	MAB	1.31	0.19	1.45	0.16	1.39	0.39	1.1	0.84	1.06	2.01
632	MAB	1.31	0.19	1.43	0.16	1.38	0.38	1.09	0.84	1.05	2.05
633	MAB	1.29	0.19	1.39	0.15	1.35	0.38	1.08	0.81	1.05	2.04
634	MAB	1.33	0.19	1.45	0.16	1.4	0.39	1.09	0.83	1.05	2
635	MAB	1.31	0.19	1.43	0.16	1.38	0.38	1.09	0.84	1.05	2
637	MSN	1.29	0.19	1.39	0.15	1.35	0.38	1.08	0.8	1.05	2.02
638	ZRB	1.31	0.19	1.43	0.16	1.38	0.38	1.09	0.83	1.05	2.02
639	PUR	1.24	0.19	1.32	0.15	1.25	0.37	1.07	0.79	1.01	1.96
641	MAB	1.26	0.18	1.37	0.15	1.33	0.38	1.09	0.82	1.05	2.05
642	MAB	1.25	0.18	1.37	0.15	1.35	0.37	1.1	0.83	1.08	2.06
643	CHN	1.23	0.18	1.32	0.15	1.29	0.37	1.08	0.81	1.05	2.06
645	DLB	1.23	0.19	1.3	0.15	1.22	0.36	1.06	0.75	0.99	1.85
648	CFD	1.17	0.18	1.26	0.14	1.21	0.37	1.07	0.78	1.03	2.09
649	BVL	1.28	0.19	1.38	0.15	1.35	0.39	1.08	0.79	1.06	2.04
650	MAB	1.3	0.19	1.4	0.15	1.36	0.39	1.08	0.79	1.04	2
651	RDM	1.34	0.21	1.43	0.17	1.37	0.39	1.06	0.8	1.02	1.89
653	LET	1.27	0.2	1.34	0.16	1.27	0.38	1.05	0.77	1	1.85
654	PUY	1.32	0.21	1.43	0.17	1.38	0.4	1.08	0.83	1.05	1.89
655	DEL	1.36	0.23	1.43	0.17	1.35	0.38	1.05	0.76	0.99	1.67

Appendix C-4b (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	1.28	0.21	1.32	0.16	1.25	0.37	1.04	0.74	0.98	1.77
657	LET	1.24	0.2	1.28	0.15	1.23	0.37	1.03	0.74	0.99	1.88
658	CMY	1.23	0.19	1.21	0.14	1.18	0.36	0.99	0.74	0.96	1.89
659	DEL	1.35	0.24	1.4	0.17	1.32	0.38	1.03	0.72	0.98	1.63
660	CVD	1.3	0.2	1.4	0.17	1.36	0.39	1.08	0.83	1.04	1.93
661	RDM	1.31	0.2	1.4	0.16	1.35	0.39	1.06	0.79	1.03	1.95
663	LET	1.24	0.19	1.28	0.15	1.23	0.37	1.03	0.77	0.99	1.95
664	RDM	1.26	0.2	1.32	0.15	1.27	0.38	1.05	0.75	1.01	1.9
666	PUR	1.15	0.17	1.23	0.14	1.17	0.34	1.06	0.79	1.01	1.97
667	LET	1.24	0.19	1.31	0.15	1.25	0.37	1.06	0.78	1.01	1.94
669	LOB	1.27	0.23	1.27	0.18	1.2	0.4	1	0.77	0.94	1.72
671	PHS	1.35	0.23	1.39	0.19	1.32	0.41	1.03	0.82	0.98	1.75
672	PED	1.38	0.24	1.43	0.2	1.35	0.41	1.03	0.83	0.98	1.74
673	MMO	1.36	0.23	1.4	0.2	1.33	0.42	1.03	0.84	0.98	1.78
675	BTN	1.26	0.22	1.32	0.19	1.27	0.4	1.04	0.83	1	1.81
676	CYG	1.25	0.22	1.32	0.19	1.27	0.4	1.05	0.85	1.02	1.86
677	BEN	1.35	0.23	1.4	0.2	1.33	0.42	1.03	0.85	0.98	1.79
680	PNC	1.16	0.21	1.16	0.17	1.1	0.39	1	0.77	0.95	1.81
681	CYG	1.27	0.23	1.29	0.18	1.23	0.4	1.02	0.81	0.97	1.78
682	BEN	1.21	0.22	1.24	0.18	1.18	0.4	1.02	0.81	0.98	1.81
683	HUB	1.19	0.21	1.25	0.18	1.21	0.4	1.05	0.84	1.02	1.88
684	CAR	1.15	0.21	1.16	0.17	1.11	0.39	1.01	0.79	0.97	1.82
686	LOB	1.22	0.23	1.22	0.17	1.15	0.39	1	0.76	0.94	1.74
689	CAR	1.15	0.22	1.14	0.17	1.08	0.39	0.99	0.77	0.94	1.77
690	RMY	1.22	0.22	1.27	0.18	1.22	0.4	1.03	0.82	0.99	1.82
691	HUB	1.15	0.22	1.18	0.17	1.15	0.4	1.03	0.8	0.99	1.81
692	BTN	1.19	0.22	1.24	0.18	1.2	0.4	1.04	0.82	1.01	1.82
693	RMY	1.22	0.22	1.29	0.18	1.25	0.4	1.06	0.83	1.02	1.85
694	HUB	1.22	0.21	1.28	0.18	1.24	0.4	1.05	0.85	1.02	1.89
695	BTN	1.2	0.2	1.28	0.18	1.24	0.4	1.06	0.88	1.03	1.95
696	BTN	1.22	0.21	1.27	0.18	1.23	0.4	1.04	0.83	1.01	1.88
698	MYW	1.15	0.21	1.2	0.17	1.17	0.4	1.04	0.81	1.02	1.9
699	HUB	1.19	0.21	1.24	0.18	1.2	0.4	1.04	0.83	1.01	1.9
702	CVL	1.35	0.23	1.37	0.19	1.3	0.41	1.02	0.81	0.97	1.77
703	HGV	1.22	0.21	1.26	0.18	1.22	0.4	1.03	0.83	1	1.86
705	MCO	1.14	0.2	1.18	0.17	1.17	0.39	1.04	0.85	1.02	1.95
708	MLA	1.16	0.21	1.2	0.18	1.17	0.4	1.04	0.85	1.01	1.9
709	COA	1.16	0.21	1.21	0.18	1.15	0.4	1.04	0.84	0.99	1.9
710	COA	1.25	0.22	1.29	0.18	1.23	0.4	1.03	0.83	0.99	1.84
711	COA	1.18	0.21	1.23	0.18	1.17	0.4	1.04	0.84	0.99	1.91
715	KVG	1.2	0.21	1.25	0.18	1.18	0.4	1.04	0.85	0.99	1.9

Appendix C-4c: Annual canola residue (t/ha) from canola-wheat-fallow averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{tp}, SN_t).

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	1.82	1.07	2.03	1.08	2.04	1.15	1.12	1.01	1.12	1.07
3	DON	1.86	1.07	2.01	1.08	2.06	1.16	1.08	1.01	1.11	1.09
4	HZM	1.84	1.04	1.96	1.05	2.04	1.16	1.07	1.01	1.11	1.12
5	DON	1.84	1.03	1.94	1.04	2.04	1.16	1.05	1.01	1.11	1.13
6	ESH	1.9	1.08	1.99	1.09	2.1	1.19	1.05	1.01	1.11	1.11
7	COS	1.82	1.06	2.01	1.07	2.05	1.15	1.11	1.01	1.13	1.08
9	BBN	1.81	1.03	1.95	1.04	2.07	1.15	1.08	1.01	1.14	1.11
10	BBN	1.8	1.01	1.92	1.04	2.07	1.15	1.07	1.03	1.15	1.14
11	ESH	1.82	1.03	1.92	1.05	2.05	1.16	1.06	1.02	1.13	1.13
13	HZM	1.77	1.01	1.96	1.05	2.11	1.17	1.11	1.04	1.19	1.16
14	COS	1.78	1.02	1.93	1.03	2.09	1.15	1.08	1.01	1.17	1.12
15	ABT	1.76	1	1.94	1.04	2.1	1.16	1.1	1.03	1.19	1.15
19	HZM	1.76	1	1.94	1.04	2.1	1.16	1.1	1.04	1.19	1.16
20	LAD	1.78	1	1.94	1.05	2.1	1.17	1.09	1.05	1.18	1.17
22	COS	1.73	0.98	1.98	1.06	2.12	1.19	1.14	1.08	1.22	1.21
27	DON	1.74	0.98	1.94	1.04	2.14	1.19	1.12	1.07	1.23	1.22
28	HZM	1.82	1.06	2	1.07	2.06	1.15	1.1	1.01	1.13	1.09
32	HRT	1.82	1	1.93	1.06	2.13	1.17	1.06	1.06	1.17	1.17
33	HRT	1.81	1	1.94	1.06	2.12	1.17	1.07	1.06	1.17	1.17
36	COS	1.8	1	1.93	1.05	2.12	1.18	1.07	1.06	1.17	1.18
47	DON	1.82	1.02	1.93	1.06	2.06	1.18	1.06	1.04	1.13	1.15
48	DON	1.81	1.01	1.92	1.06	2.07	1.17	1.06	1.05	1.15	1.16
49	TAG	1.81	1.01	1.93	1.06	2.09	1.17	1.07	1.05	1.16	1.16
51	SAD	1.8	1.01	1.92	1.06	2.07	1.16	1.07	1.05	1.15	1.15
52	VVW	1.8	1.01	1.93	1.06	2.1	1.17	1.07	1.05	1.16	1.16
53	TAG	1.8	1	1.94	1.06	2.11	1.17	1.08	1.06	1.18	1.17
54	ESH	1.8	1.01	1.92	1.06	2.06	1.16	1.07	1.05	1.14	1.15
56	ZBR	1.84	1.05	1.95	1.08	2.07	1.18	1.06	1.02	1.12	1.12
59	FAL	1.88	1.07	1.96	1.08	2.02	1.19	1.04	1.01	1.08	1.12
60	BBN	1.9	1.08	1.97	1.09	2.02	1.21	1.04	1.01	1.06	1.12
61	RYF	1.82	1.02	1.92	1.06	2.04	1.16	1.06	1.03	1.12	1.13
62	DVS	1.83	1.04	1.92	1.07	1.95	1.14	1.05	1.03	1.07	1.1
64	JUH	1.86	1.06	1.94	1.08	1.99	1.17	1.05	1.02	1.07	1.1
68	HRT	1.83	1.04	1.92	1.07	1.98	1.15	1.05	1.03	1.08	1.11
70	JUH	1.83	1.04	1.91	1.05	2.01	1.15	1.04	1.01	1.1	1.11
71	BBN	1.83	1.03	1.92	1.05	2.04	1.16	1.05	1.02	1.12	1.13
72	BLY	1.82	1.03	1.92	1.06	2.04	1.16	1.06	1.03	1.12	1.13
73	RYF	1.83	1.04	1.92	1.05	2.05	1.16	1.05	1.01	1.12	1.12
74	JUH	1.84	1.04	1.9	1.04	2.04	1.15	1.03	1	1.11	1.11
75	DIG	1.96	1.13	1.99	1.11	2.12	1.23	1.02	0.99	1.08	1.09
76	JUH	1.86	1.06	1.92	1.06	2.02	1.16	1.04	1.01	1.09	1.1
77	LAD	1.9	1.09	1.94	1.08	2.08	1.2	1.02	0.99	1.09	1.1
78	ABT	1.88	1.07	1.94	1.08	2.05	1.18	1.03	1	1.09	1.1
80	BWY	1.91	1.09	1.96	1.1	2.07	1.2	1.03	1.01	1.08	1.1
81	HZM	1.94	1.12	1.97	1.11	2.09	1.22	1.02	0.99	1.08	1.1
83	BUD	1.93	1.11	1.98	1.11	2.09	1.22	1.02	1	1.08	1.1
84	HZM	1.93	1.1	1.98	1.11	2.08	1.22	1.03	1	1.08	1.1
87	NPA	1.96	1.13	2.05	1.14	2.16	1.23	1.04	1	1.1	1.09
88	FAL	1.97	1.14	2.04	1.14	2.17	1.24	1.04	1	1.1	1.09
89	JUH	1.85	1.08	2.03	1.1	2.07	1.16	1.1	1.01	1.12	1.07
91	HZM	1.94	1.13	2.07	1.16	2.14	1.18	1.06	1.02	1.1	1.05
93	DON	1.97	1.14	2.06	1.14	2.19	1.24	1.05	1	1.11	1.09
94	HRT	1.96	1.13	1.98	1.12	2.12	1.24	1.01	0.99	1.08	1.09
97	FAL	1.89	1.08	1.97	1.1	2.02	1.19	1.04	1.02	1.07	1.11
98	HZM	1.89	1.09	1.97	1.1	2.06	1.2	1.04	1.01	1.09	1.1

Appendix C-4c (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	1.89	1.08	2	1.11	2.03	1.17	1.06	1.03	1.07	1.09
101	FAL	1.89	1.08	1.96	1.1	2.04	1.19	1.04	1.01	1.08	1.1
102	WHW	1.91	1.09	1.97	1.11	2.07	1.2	1.03	1.02	1.08	1.1
103	ABT	1.91	1.09	1.99	1.1	2.06	1.2	1.04	1.01	1.08	1.1
104	HZM	1.91	1.09	1.99	1.1	2.06	1.2	1.04	1.01	1.08	1.1
105	CTE	1.92	1.1	2	1.11	2.07	1.2	1.04	1.01	1.08	1.09
107	ALC	1.93	1.11	2	1.11	2.1	1.21	1.04	1	1.09	1.09
108	HZM	1.9	1.09	2	1.1	2.05	1.2	1.05	1.01	1.08	1.1
109	PRV	1.91	1.1	1.99	1.1	2.06	1.2	1.04	1	1.08	1.1
110	CTE	1.92	1.1	2.01	1.12	2.08	1.2	1.05	1.01	1.08	1.09
112	ALC	1.92	1.1	2.01	1.1	2.07	1.2	1.05	1.01	1.08	1.1
130	DVS	1.76	1.03	1.84	1.03	1.96	1.17	1.05	1	1.12	1.14
132	CTE	1.78	1.06	1.84	1.07	2.03	1.19	1.03	1.01	1.14	1.12
133	BBN	1.91	1.09	1.99	1.1	2.07	1.21	1.04	1.01	1.08	1.11
135	DVS	1.9	1.08	1.97	1.09	2.05	1.21	1.04	1.01	1.08	1.12
144	BBN	1.87	1.08	1.99	1.1	2.18	1.25	1.07	1.02	1.17	1.16
170	HUB	1.86	1.1	2.09	1.15	2.14	1.24	1.12	1.05	1.15	1.12
171	HUB	1.93	1.12	2.05	1.14	2.16	1.26	1.06	1.02	1.12	1.12
172	KTH	1.97	1.18	2.05	1.17	2.17	1.27	1.04	1	1.1	1.08
173	CUL	1.97	1.18	2.05	1.18	2.18	1.28	1.04	1	1.11	1.09
176	HRT	2.06	1.19	2.01	1.14	2.14	1.16	0.98	0.96	1.04	0.97
177	HRT	2.01	1.16	2.05	1.14	2.16	1.25	1.02	0.98	1.07	1.07
178	HPE	2.07	1.21	2.03	1.11	2.15	1.23	0.98	0.92	1.04	1.02
180	KNZ	2.05	1.2	2.05	1.14	2.16	1.25	1	0.95	1.05	1.04
181	COS	2.05	1.2	2.08	1.17	2.18	1.26	1.01	0.97	1.06	1.05
182	ATO	2.07	1.2	2.02	1.09	2.15	1.23	0.98	0.91	1.04	1.02
185	UCS	2.07	1.2	2	1.09	2.14	1.21	0.97	0.91	1.03	1.01
189	CUL	2.06	1.19	2.01	1.14	2.14	1.17	0.98	0.95	1.04	0.98
192	COA	2.01	1.18	2.03	1.15	2.15	1.22	1.01	0.97	1.07	1.03
193	MLA	2	1.16	2.06	1.14	2.14	1.24	1.03	0.99	1.07	1.07
194	MLA	2.07	1.2	2	1.11	2.13	1.19	0.97	0.93	1.03	1
196	LNN	2.08	1.21	1.99	1.05	2.14	1.22	0.95	0.87	1.03	1.01
197	COA	2.09	1.21	1.96	1.08	2.12	1.19	0.94	0.89	1.01	0.98
198	COA	2.08	1.21	2.02	1.12	2.14	1.2	0.97	0.93	1.03	0.99
201	HRT	1.95	1.17	2.06	1.18	2.18	1.3	1.06	1.01	1.12	1.11
211	ZOR	2.06	1.21	2.09	1.17	2.19	1.25	1.01	0.97	1.06	1.03
212	ABC	2.06	1.21	2.07	1.16	2.17	1.23	1.01	0.96	1.05	1.01
215	ABC	2.06	1.21	2.06	1.16	2.17	1.24	1	0.95	1.06	1.02
218	KNZ	2.02	1.19	1.94	1.07	2.12	1.2	0.96	0.9	1.05	1.01
221	EGL	2.05	1.21	2.08	1.15	2.14	1.19	1.02	0.95	1.04	0.99
224	ABC	2.04	1.2	2.05	1.13	2.14	1.19	1.01	0.94	1.05	0.99
227	TNW	2.01	1.19	1.93	1.06	2.11	1.19	0.96	0.89	1.05	1
231	ABC	2.02	1.19	1.92	1.06	2.1	1.18	0.95	0.89	1.04	0.99
232	MLA	1.99	1.18	1.9	1.04	2.11	1.19	0.95	0.88	1.06	1
233	KNZ	2	1.19	1.94	1.06	2.12	1.19	0.97	0.9	1.06	1
236	ABC	2.05	1.21	2.02	1.12	2.13	1.18	0.99	0.93	1.04	0.98
240	KNZ	2.02	1.19	1.95	1.08	2.11	1.18	0.97	0.9	1.04	0.99
246	GDI	2.05	1.2	2.02	1.13	2.1	1.17	0.98	0.94	1.02	0.97
248	GDI	2.04	1.19	2	1.13	2.05	1.14	0.98	0.95	1.01	0.96
250	ABC	2.03	1.19	1.99	1.11	2.06	1.13	0.98	0.94	1.01	0.95
252	UCS	2.07	1.21	2.02	1.1	2.15	1.23	0.97	0.91	1.04	1.02
253	COD	2.07	1.21	1.99	1.08	2.13	1.22	0.96	0.89	1.03	1.01
254	PIB	2.08	1.2	1.98	1.06	2.12	1.21	0.95	0.88	1.02	1.01
258	POK	2.03	1.17	1.89	1.04	2.04	1.15	0.93	0.88	1	0.98
259	RDW	2.06	1.2	1.95	1.07	2.08	1.18	0.95	0.89	1.01	0.99
261	NIT	2.06	1.2	1.95	1.08	2.06	1.17	0.95	0.9	1	0.98
264	COA	2.07	1.21	1.98	1.1	2.07	1.18	0.96	0.91	1	0.97

Appendix C-4c (Continued):

Poly #	Soil name	BL		SN_i		SN_φ		SN_i/BL		SN_φ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	2.04	1.2	1.95	1.08	2.09	1.18	0.96	0.9	1.02	0.98
271	FLU	2.02	1.17	1.92	1.07	2.05	1.16	0.95	0.91	1.01	0.99
275	RDW	1.97	1.14	1.9	1.06	2.03	1.14	0.97	0.92	1.03	1
279	ABC	2	1.17	1.95	1.09	2.04	1.13	0.98	0.93	1.02	0.96
290	ABC	2.05	1.19	2.02	1.14	2.07	1.15	0.99	0.96	1.01	0.96
291	LCY	2.03	1.18	2	1.12	2.07	1.15	0.99	0.95	1.02	0.97
292	TMN	2	1.17	1.99	1.11	2.08	1.16	0.99	0.95	1.04	1
296	NIT	1.89	1.09	1.77	0.96	1.91	1.12	0.94	0.88	1.01	1.03
297	GOG	1.99	1.16	1.94	1.08	2.03	1.14	0.97	0.93	1.02	0.98
301	SDN	1.92	1.11	1.83	1	1.95	1.12	0.95	0.9	1.01	1.01
302	LCY	1.89	1.09	1.77	0.96	1.9	1.12	0.94	0.88	1.01	1.03
306	LCY	2	1.17	1.96	1.09	2.03	1.12	0.98	0.93	1.02	0.95
310	FRY	1.9	1.1	1.83	1.01	1.96	1.12	0.96	0.92	1.03	1.02
311	FRY	1.95	1.14	1.9	1.06	2.02	1.13	0.97	0.93	1.03	0.99
312	FRY	1.92	1.11	1.85	1.03	2	1.12	0.97	0.93	1.04	1.01
315	NTW	1.96	1.15	1.94	1.08	2.04	1.18	0.99	0.94	1.04	1.03
316	LCY	1.97	1.15	1.94	1.08	2.02	1.18	0.98	0.94	1.03	1.03
317	LCY	1.97	1.14	1.92	1.06	2.01	1.15	0.97	0.93	1.02	1.01
320	FRY	1.96	1.14	1.89	1.05	1.96	1.16	0.96	0.92	1	1.01
322	LCY	1.93	1.13	1.86	1.04	1.97	1.16	0.96	0.92	1.02	1.03
323	LCY	1.94	1.13	1.86	1.04	1.97	1.16	0.96	0.92	1.02	1.03
325	LCY	1.94	1.13	1.86	1.03	1.96	1.15	0.96	0.92	1.01	1.02
326	LCY	1.9	1.1	1.8	0.98	1.92	1.13	0.94	0.89	1.01	1.03
334	LCY	1.93	1.12	1.86	1.02	1.96	1.13	0.96	0.92	1.01	1.01
335	FRY	1.92	1.12	1.84	1.03	1.96	1.15	0.96	0.92	1.02	1.03
337	MGS	1.89	1.09	1.81	1.01	1.95	1.15	0.96	0.93	1.03	1.06
339	LFN	1.89	1.09	1.81	1.01	1.95	1.15	0.96	0.93	1.03	1.06
341	MGS	1.92	1.11	1.84	1.03	1.96	1.15	0.96	0.92	1.02	1.03
342	LFN	1.94	1.12	1.86	1.03	1.96	1.14	0.96	0.92	1.01	1.01
343	FRY	1.95	1.13	1.88	1.04	1.96	1.14	0.96	0.92	1	1
344	BSU	1.95	1.12	1.87	1.03	1.98	1.16	0.96	0.92	1.02	1.03
345	SDN	1.96	1.13	1.88	1.03	1.99	1.17	0.96	0.92	1.02	1.03
346	PHS	1.94	1.12	1.86	1.03	1.96	1.14	0.96	0.92	1.01	1.02
347	SDN	1.89	1.08	1.81	1	1.97	1.14	0.96	0.93	1.04	1.05
348	SDN	1.89	1.09	1.82	1.01	1.96	1.13	0.96	0.92	1.03	1.04
350	LFN	1.87	1.07	1.81	1	1.97	1.13	0.97	0.93	1.05	1.05
351	LFN	1.92	1.11	1.85	1.02	1.99	1.16	0.96	0.93	1.03	1.05
352	RDW	1.93	1.11	1.86	1.03	1.99	1.16	0.96	0.93	1.03	1.05
354	BVH	1.88	1.07	1.8	1.01	1.94	1.14	0.96	0.94	1.04	1.06
356	EOR	1.83	1.05	1.75	1	1.91	1.13	0.95	0.95	1.04	1.07
357	EOR	1.88	1.08	1.8	1.01	1.95	1.15	0.96	0.94	1.04	1.06
359	RED	1.9	1.08	1.83	1.02	1.99	1.16	0.96	0.95	1.05	1.08
360	EOR	1.91	1.09	1.84	1.03	1.99	1.17	0.96	0.94	1.04	1.07
362	EOR	1.91	1.08	1.84	1.02	1.98	1.15	0.97	0.94	1.04	1.06
363	EOR	1.89	1.07	1.83	1.01	1.97	1.15	0.97	0.94	1.04	1.07
364	EOR	1.81	1.04	1.79	0.99	1.95	1.12	0.99	0.95	1.08	1.07
365	HND	1.83	1.05	1.79	1	1.96	1.13	0.98	0.95	1.07	1.08
366	[illegible]	1.85	1.06	1.8	1	1.97	1.14	0.97	0.95	1.06	1.08
367	[illegible]	1.86	1.06	1.8	1	1.97	1.15	0.97	0.95	1.06	1.08
370	[illegible]	1.79	1.03	1.72	0.97	1.93	1.12	0.96	0.94	1.07	1.08
371	WWT	1.82	1.03	1.76	0.98	1.94	1.14	0.97	0.95	1.07	1.1
372	EOR	1.85	1.05	1.79	1.01	1.97	1.15	0.96	0.96	1.06	1.09
374	EOR	1.83	1.05	1.76	1	1.93	1.13	0.96	0.95	1.05	1.08
375	WWT	1.8	1.03	1.74	0.98	1.91	1.13	0.97	0.95	1.06	1.1
376	HND	1.8	1.02	1.76	0.97	1.91	1.14	0.98	0.95	1.07	1.12
378	HND	1.79	1.01	1.77	0.95	1.92	1.14	0.99	0.95	1.07	1.14
392	AGS	1.9	1.09	1.82	1.01	1.99	1.14	0.96	0.93	1.05	1.04

Appendix C-4c (Continued):

Poly #	Soil name	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	1.96	1.13	1.88	1.03	2.04	1.17	0.96	0.91	1.04	1.03
396	AGS	1.99	1.14	1.88	1.03	2.01	1.14	0.94	0.91	1.01	1
401	MGS	1.99	1.14	1.83	1	1.98	1.12	0.92	0.88	1	0.98
403	CMO	1.95	1.12	1.87	1.03	2.04	1.16	0.96	0.92	1.05	1.04
404	AGS	1.95	1.12	1.87	1.03	2.05	1.17	0.96	0.92	1.05	1.05
405	CMO	1.92	1.1	1.84	1.01	2.01	1.15	0.96	0.92	1.05	1.05
408	AGS	1.9	1.09	1.84	1.02	2.01	1.15	0.97	0.93	1.06	1.06
409	AGS	1.93	1.09	1.87	1.02	2.03	1.16	0.97	0.94	1.05	1.06
410	UCS	1.95	1.12	1.86	1.03	2.02	1.15	0.95	0.92	1.03	1.03
411	COA	2	1.14	1.89	1.05	1.98	1.12	0.95	0.92	0.99	0.98
412	CMO	1.89	1.07	1.84	1	2.02	1.16	0.97	0.94	1.07	1.09
416	WKN	1.99	1.14	1.82	1	1.97	1.11	0.91	0.88	0.99	0.98
418	MMO	2.06	1.19	1.89	1.05	2.07	1.15	0.92	0.88	1	0.97
420	TBY	2.09	1.2	1.88	1.06	2.09	1.15	0.9	0.88	1	0.95
421	HND	1.79	1.02	1.77	1	1.95	1.15	0.99	0.97	1.09	1.12
422	HCH	1.73	0.99	1.71	0.96	1.9	1.12	0.99	0.98	1.1	1.13
423	LET	1.68	0.95	1.69	0.94	1.87	1.09	1.01	0.99	1.11	1.15
425	HND	1.75	1	1.8	1.02	1.98	1.19	1.03	1.02	1.13	1.19
426	MMO	2.04	1.17	1.91	1.05	2.04	1.15	0.94	0.9	1	0.98
428	HND	1.64	0.94	1.7	0.97	1.92	1.13	1.04	1.02	1.17	1.2
429	FLU	2.01	1.14	1.91	1.06	1.98	1.12	0.95	0.92	0.98	0.98
430	MCO	1.97	1.11	1.89	1.04	2.01	1.14	0.96	0.94	1.02	1.02
431	AGS	1.96	1.1	1.89	1.04	2.04	1.16	0.97	0.95	1.04	1.06
432	KVG	2.01	1.15	1.92	1.06	2.05	1.15	0.96	0.93	1.02	1.01
433	POK	2.05	1.17	1.97	1.08	2.1	1.19	0.96	0.92	1.02	1.01
435	BTN	2.02	1.16	1.92	1.07	2.06	1.12	0.95	0.92	1.02	0.97
437	POK	1.99	1.13	1.91	1.06	2.06	1.15	0.96	0.94	1.03	1.02
439	COA	1.96	1.12	1.87	1.03	2.01	1.14	0.95	0.92	1.02	1.02
440	COA	2.09	1.2	1.88	1.06	2.09	1.15	0.9	0.88	1	0.95
441	MMO	2.05	1.17	1.88	1.04	2.04	1.14	0.92	0.89	1	0.97
442	WTB	2.08	1.2	1.97	1.08	2.12	1.2	0.95	0.9	1.02	1
443	HND	1.79	1.02	1.8	1.02	1.97	1.17	1.01	1	1.11	1.15
444	MET	1.79	1.02	1.78	1.01	1.96	1.14	0.99	0.99	1.09	1.12
449	KUR	1.53	0.88	1.6	0.9	1.83	1.07	1.05	1.02	1.2	1.21
451	MET	1.43	0.82	1.54	0.86	1.83	1.06	1.08	1.04	1.28	1.3
452	LET	1.45	0.84	1.55	0.86	1.81	1.05	1.07	1.03	1.25	1.25
453	CHN	1.42	0.81	1.53	0.85	1.85	1.08	1.08	1.05	1.3	1.33
457	MAB	1.35	0.77	1.47	0.82	1.82	1.07	1.08	1.07	1.34	1.39
458	MAB	1.29	0.72	1.38	0.78	1.76	1.04	1.07	1.07	1.37	1.43
460	WDN	1.31	0.74	1.41	0.79	1.78	1.05	1.08	1.07	1.36	1.42
461	BVL	1.37	0.78	1.48	0.83	1.84	1.07	1.08	1.06	1.34	1.38
463	HND	1.4	0.79	1.53	0.85	1.87	1.09	1.1	1.07	1.34	1.38
466	HND	1.43	0.83	1.54	0.86	1.83	1.06	1.07	1.04	1.27	1.28
467	WWT	1.49	0.86	1.57	0.88	1.82	1.06	1.06	1.03	1.23	1.23
471	HUK	1.46	0.84	1.55	0.88	1.85	1.08	1.07	1.04	1.27	1.28
472	MAB	1.3	0.74	1.38	0.77	1.78	1.06	1.06	1.04	1.37	1.43
473	HND	1.41	0.81	1.52	0.85	1.86	1.08	1.08	1.05	1.32	1.34
474	MAB	1.34	0.77	1.44	0.8	1.81	1.07	1.07	1.05	1.35	1.39
475	BVL	1.35	0.78	1.44	0.81	1.83	1.08	1.07	1.04	1.36	1.39
476	MAB	1.33	0.77	1.41	0.79	1.82	1.09	1.05	1.02	1.37	1.42
478	CCL	1.39	0.81	1.49	0.84	1.86	1.09	1.07	1.04	1.33	1.35
480	HUK	1.53	0.89	1.61	0.93	1.89	1.09	1.05	1.04	1.23	1.22
481	YTW	1.56	0.91	1.64	0.95	1.91	1.09	1.05	1.04	1.22	1.19
484	WWT	1.66	0.96	1.71	0.98	1.94	1.14	1.03	1.02	1.16	1.19
486	YTW	1.57	0.91	1.63	0.94	1.91	1.12	1.04	1.03	1.22	1.23
487	HUK	1.33	0.77	1.41	0.79	1.8	1.06	1.06	1.03	1.35	1.38
489	HUK	1.45	0.84	1.51	0.86	1.86	1.1	1.04	1.03	1.28	1.31

Appendix C-4c (Continued):

Poly #	Soil name	BL		SN_t		SN_{φ}		SN_t/BL		SN_{φ}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	1.75	0.99	1.76	1	1.95	1.15	1.01	1.01	1.12	1.16
496	MET	1.5	0.86	1.55	0.88	1.88	1.11	1.03	1.02	1.25	1.29
499	CVD	1.2	0.69	1.31	0.74	1.63	0.93	1.09	1.07	1.36	1.34
508	AGS	1.89	1.06	1.85	1.01	2.02	1.16	0.98	0.96	1.07	1.09
509	PHS	1.98	1.12	1.9	1.05	2.05	1.15	0.96	0.94	1.04	1.02
510	AGS	1.86	1.05	1.82	0.99	2.02	1.16	0.98	0.95	1.09	1.11
512	BVH	1.86	1.06	1.83	1.01	2	1.15	0.98	0.95	1.07	1.08
513	AGS	1.88	1.06	1.85	1.01	2.02	1.16	0.98	0.95	1.07	1.09
514	PHS	1.9	1.07	1.86	1.03	2.04	1.16	0.98	0.96	1.08	1.08
515	BVH	1.88	1.05	1.87	1.05	2.06	1.15	1	1	1.1	1.1
516	BVH	1.93	1.09	1.89	1.04	2.07	1.17	0.98	0.95	1.07	1.07
517	FLU	1.96	1.12	1.87	1.03	2.06	1.18	0.95	0.92	1.05	1.06
518	MGS	1.96	1.12	1.91	1.05	2.07	1.18	0.98	0.94	1.06	1.05
519	NVR	1.93	1.08	1.88	1.03	2.05	1.17	0.98	0.96	1.07	1.09
520	AGS	1.95	1.1	1.89	1.04	2.06	1.17	0.97	0.95	1.06	1.06
521	POK	1.98	1.13	1.92	1.06	2.06	1.16	0.97	0.94	1.04	1.03
523	PED	1.94	1.11	1.94	1.08	2.09	1.19	1	0.97	1.08	1.07
524	FLU	1.99	1.14	1.96	1.07	2.07	1.18	0.99	0.94	1.04	1.03
531	GDB	1.78	1.01	1.8	1	1.95	1.12	1.01	0.99	1.09	1.11
532	HKR	1.75	0.98	1.77	1	1.95	1.13	1.01	1.02	1.12	1.15
533	HND	1.71	0.97	1.73	0.98	1.93	1.14	1.01	1.01	1.13	1.18
534	MET	1.72	0.97	1.71	0.96	1.9	1.13	0.99	1	1.11	1.17
536	HND	1.75	0.98	1.74	0.97	1.91	1.12	0.99	1	1.09	1.15
537	BVH	1.81	1.01	1.82	1.02	1.99	1.13	1.01	1.01	1.1	1.12
538	HND	1.79	1	1.76	0.99	1.94	1.13	0.98	0.99	1.08	1.13
539	PHS	1.81	1	1.82	1.02	1.99	1.13	1.01	1.01	1.1	1.12
540	KLM	1.77	0.98	1.8	1.01	1.96	1.11	1.02	1.03	1.11	1.13
543	EOR	1.83	1.03	1.78	1.01	1.97	1.13	0.98	0.98	1.08	1.11
545	IRM	1.86	1.04	1.83	1.03	2.01	1.15	0.99	0.99	1.08	1.1
547	DEL	1.87	1.05	1.83	1.03	2.01	1.16	0.98	0.98	1.08	1.1
548	BVH	1.88	1.06	1.88	1.06	2.06	1.16	1	1	1.09	1.1
549	FLU	1.91	1.08	1.9	1.06	2.08	1.17	1	0.99	1.09	1.08
551	FLU	1.9	1.08	1.91	1.08	2.09	1.19	1	1	1.1	1.1
553	ATL	1.93	1.1	1.91	1.07	2.05	1.17	0.99	0.97	1.06	1.06
554	ATL	1.91	1.1	1.94	1.09	2.11	1.22	1.01	0.99	1.11	1.12
555	CYG	1.93	1.11	1.96	1.12	2.14	1.22	1.02	1.01	1.11	1.1
558	DEL	1.93	1.11	1.96	1.1	2.13	1.24	1.01	0.99	1.1	1.11
559	ATL	1.78	1.03	1.96	1.11	2.12	1.22	1.1	1.08	1.2	1.18
561	ATL	1.82	1.05	1.91	1.08	2.13	1.23	1.05	1.03	1.17	1.18
562	BGH	1.85	1.06	1.95	1.1	2.12	1.23	1.05	1.04	1.15	1.16
563	BSK	1.94	1.11	1.92	1.08	2.07	1.18	0.99	0.97	1.07	1.06
564	LET	1.52	0.85	1.57	0.86	1.81	1.05	1.03	1.01	1.2	1.24
565	DEL	1.93	1.1	1.95	1.09	2.12	1.23	1.01	0.99	1.09	1.11
566	DEL	1.83	1.03	1.9	1.06	2.08	1.21	1.04	1.03	1.13	1.17
567	BSK	1.85	1.06	1.84	1.03	2	1.17	0.99	0.98	1.08	1.1
568	DEL	1.84	1.04	1.77	1.01	1.96	1.14	0.96	0.97	1.06	1.1
569	IRM	1.86	1.05	1.81	1.03	1.98	1.15	0.98	0.97	1.07	1.09
570	HAN	1.8	1.02	1.74	0.99	1.89	1.12	0.97	0.97	1.05	1.1
571	HAN	1.69	0.95	1.67	0.94	1.88	1.12	0.98	0.99	1.11	1.17
572	DVG	1.73	0.99	1.98	1.1	2.14	1.26	1.14	1.12	1.24	1.27
574	LET	1.78	1.01	1.73	0.97	1.85	1.1	0.97	0.97	1.04	1.1
575	WWT	1.69	0.98	1.68	0.95	1.89	1.12	0.99	0.97	1.12	1.15
576	DMH	1.7	0.97	1.66	0.94	1.84	1.09	0.98	0.97	1.09	1.13
577	BZR	1.71	0.96	1.9	1.04	2.01	1.18	1.11	1.08	1.17	1.23
578	HAN	1.62	0.92	1.59	0.91	1.84	1.08	0.98	0.98	1.14	1.16
579	LET	1.67	0.96	1.65	0.93	1.85	1.11	0.99	0.97	1.11	1.15
581	HKR	1.61	0.93	1.64	0.94	1.9	1.13	1.02	1.01	1.18	1.22

Appendix C-4c (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	1.63	0.93	1.62	0.92	1.86	1.09	0.99	1	1.14	1.18
583	HAN	1.62	0.92	1.61	0.92	1.87	1.1	1	1	1.16	1.2
584	DMH	1.72	0.97	1.68	0.95	1.88	1.11	0.98	0.98	1.09	1.15
589	HAN	1.6	0.91	1.58	0.9	1.85	1.08	0.99	1	1.16	1.19
590	CHN	1.2	0.67	1.28	0.72	1.69	1	1.06	1.08	1.4	1.5
591	BVL	1.25	0.71	1.32	0.74	1.73	1.03	1.06	1.04	1.38	1.45
592	FMT	1.27	0.72	1.33	0.74	1.73	1.03	1.05	1.02	1.37	1.42
593	CVD	1.27	0.72	1.33	0.74	1.74	1.04	1.05	1.02	1.38	1.44
595	ATP	1.22	0.7	1.29	0.72	1.71	1.02	1.05	1.04	1.4	1.46
596	FMT	1.3	0.75	1.36	0.77	1.72	1.01	1.05	1.03	1.32	1.35
598	FMT	1.31	0.75	1.37	0.77	1.72	1.01	1.05	1.02	1.31	1.34
599	MAB	1.28	0.74	1.32	0.72	1.7	1	1.03	0.98	1.33	1.36
600	CVD	1.29	0.74	1.37	0.74	1.69	0.99	1.06	1	1.31	1.34
601	MAB	1.3	0.75	1.36	0.75	1.76	1.04	1.04	1	1.35	1.39
602	MAB	1.29	0.75	1.33	0.73	1.73	1.02	1.03	0.98	1.34	1.36
603	MAB	1.32	0.75	1.37	0.73	1.66	0.97	1.04	0.98	1.26	1.3
605	HDY	1.35	0.77	1.39	0.75	1.73	1.02	1.03	0.97	1.28	1.31
606	CVD	1.29	0.74	1.37	0.76	1.7	0.98	1.05	1.02	1.31	1.32
607	CVD	1.36	0.78	1.41	0.79	1.74	1.01	1.04	1.02	1.28	1.29
608	MCT	1.45	0.84	1.48	0.82	1.79	1.05	1.02	0.99	1.24	1.26
609	TIY	1.4	0.8	1.44	0.78	1.79	1.05	1.03	0.98	1.27	1.31
610	BVL	1.41	0.8	1.41	0.75	1.72	1.01	1	0.94	1.22	1.26
611	HUK	1.44	0.82	1.45	0.79	1.79	1.05	1	0.96	1.24	1.28
613	CCL	1.53	0.89	1.53	0.86	1.84	1.09	1	0.97	1.2	1.23
615	CVD	1.35	0.74	1.38	0.73	1.68	0.97	1.03	0.99	1.25	1.31
616	CHN	1.31	0.73	1.39	0.74	1.68	0.97	1.06	1.02	1.28	1.34
617	FMT	1.31	0.73	1.42	0.76	1.69	0.99	1.08	1.04	1.29	1.35
618	CHN	1.31	0.74	1.42	0.77	1.69	1	1.09	1.03	1.29	1.34
619	FMT	1.33	0.75	1.43	0.79	1.72	1.01	1.07	1.04	1.3	1.34
620	MAB	1.37	0.78	1.5	0.82	1.79	1.04	1.09	1.05	1.3	1.33
621	TTH	1.4	0.79	1.54	0.84	1.83	1.05	1.1	1.05	1.31	1.33
622	TTH	1.41	0.8	1.56	0.85	1.84	1.06	1.11	1.06	1.31	1.32
623	ZRB	1.42	0.81	1.58	0.86	1.87	1.07	1.11	1.06	1.31	1.32
624	THA	1.46	0.83	1.63	0.89	1.92	1.09	1.12	1.07	1.32	1.31
626	SIL	1.37	0.8	1.55	0.85	1.81	1.07	1.13	1.06	1.32	1.33
627	MAB	1.37	0.79	1.53	0.83	1.8	1.05	1.11	1.05	1.31	1.33
628	BVL	1.38	0.79	1.51	0.82	1.79	1.04	1.1	1.04	1.3	1.32
629	SIL	1.37	0.79	1.52	0.83	1.79	1.05	1.11	1.05	1.3	1.32
631	MAB	1.37	0.77	1.48	0.8	1.75	1.01	1.08	1.03	1.28	1.31
632	MAB	1.37	0.77	1.48	0.8	1.75	1.03	1.08	1.04	1.28	1.33
633	MAB	1.38	0.77	1.49	0.81	1.75	1.03	1.08	1.05	1.27	1.34
634	MAB	1.39	0.79	1.49	0.81	1.77	1.02	1.08	1.03	1.28	1.29
635	MAB	1.39	0.78	1.49	0.81	1.76	1.02	1.07	1.03	1.27	1.31
637	MSN	1.38	0.77	1.5	0.81	1.75	1.04	1.09	1.05	1.27	1.34
638	ZRB	1.38	0.78	1.49	0.8	1.76	1.02	1.08	1.03	1.27	1.31
639	PUR	1.45	0.83	1.58	0.86	1.79	1.07	1.09	1.04	1.24	1.29
641	MAB	1.35	0.75	1.44	0.78	1.72	1.01	1.07	1.04	1.28	1.35
642	MAB	1.3	0.71	1.38	0.73	1.68	0.97	1.06	1.03	1.29	1.36
643	CHN	1.34	0.73	1.39	0.74	1.69	0.99	1.04	1.01	1.27	1.34
645	DLB	1.52	0.86	1.68	0.91	1.86	1.09	1.1	1.06	1.23	1.27
648	CFD	1.39	0.78	1.38	0.72	1.65	0.95	0.99	0.93	1.19	1.23
649	BVL	1.47	0.81	1.43	0.75	1.67	1.01	0.97	0.92	1.14	1.24
650	MAB	1.47	0.82	1.43	0.77	1.73	1.03	0.98	0.93	1.18	1.25
651	RDM	1.53	0.87	1.48	0.83	1.83	1.08	0.97	0.95	1.2	1.24
653	LET	1.59	0.9	1.55	0.87	1.82	1.07	0.98	0.97	1.15	1.19
654	PUY	1.56	0.9	1.56	0.87	1.85	1.1	1	0.97	1.19	1.22
655	DEL	1.72	0.98	1.81	1.02	2.03	1.19	1.05	1.04	1.18	1.21

Appendix C-4c (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	1.61	0.91	1.63	0.91	1.87	1.1	1.01	1	1.16	1.2
657	LET	1.54	0.86	1.55	0.85	1.79	1.05	1.01	0.99	1.16	1.21
658	CMY	1.51	0.85	1.43	0.78	1.65	0.96	0.95	0.92	1.1	1.13
659	DEL	1.75	1	1.92	1.09	2.14	1.26	1.1	1.09	1.22	1.25
660	CVD	1.49	0.86	1.5	0.83	1.82	1.07	1	0.97	1.22	1.25
661	RDM	1.5	0.85	1.46	0.8	1.77	1.05	0.97	0.94	1.18	1.24
663	LET	1.51	0.85	1.48	0.81	1.72	1.01	0.98	0.95	1.14	1.19
664	RDM	1.53	0.86	1.49	0.82	1.77	1.04	0.98	0.95	1.16	1.21
666	PUR	1.45	0.83	1.58	0.86	1.79	1.06	1.09	1.04	1.24	1.29
667	LET	1.45	0.81	1.55	0.84	1.79	1.05	1.07	1.03	1.23	1.29
669	LOB	1.82	1.05	1.9	1.07	2.15	1.24	1.04	1.02	1.18	1.18
671	PHS	1.9	1.09	1.92	1.08	2.1	1.2	1.01	0.99	1.11	1.1
672	PED	1.91	1.1	1.94	1.09	2.12	1.21	1.01	1	1.11	1.1
673	MMO	1.91	1.09	1.95	1.1	2.14	1.22	1.02	1.01	1.12	1.11
675	BTN	1.94	1.11	1.96	1.09	2.11	1.2	1.01	0.97	1.09	1.07
676	CYG	1.97	1.13	1.97	1.08	2.09	1.19	1	0.95	1.06	1.05
677	BEN	1.92	1.1	1.95	1.1	2.13	1.21	1.02	1	1.11	1.1
680	PNC	1.81	1.03	1.93	1.04	2.19	1.22	1.06	1.01	1.21	1.18
681	CYG	1.86	1.07	1.93	1.07	2.15	1.22	1.04	1	1.15	1.14
682	BEN	1.87	1.07	1.94	1.07	2.15	1.21	1.04	1	1.15	1.13
683	HUB	1.94	1.11	1.96	1.11	2.1	1.19	1.01	0.99	1.08	1.07
684	CAR	1.84	1.05	1.94	1.06	2.17	1.21	1.06	1.01	1.18	1.16
686	LOB	1.82	1.04	1.91	1.06	2.17	1.23	1.05	1.02	1.19	1.19
689	CAR	1.84	1.06	1.97	1.09	2.19	1.24	1.07	1.03	1.19	1.17
690	RMY	1.91	1.1	1.95	1.09	2.12	1.2	1.02	0.99	1.11	1.09
691	HUB	1.88	1.09	1.97	1.11	2.13	1.21	1.05	1.02	1.13	1.11
692	BTN	1.92	1.11	1.96	1.1	2.11	1.2	1.02	0.99	1.1	1.08
693	RMY	1.98	1.14	1.97	1.08	2.09	1.19	1	0.95	1.05	1.05
694	HUB	1.97	1.13	1.95	1.09	2.09	1.18	0.99	0.97	1.06	1.05
695	BTN	2	1.14	1.94	1.09	2.07	1.15	0.97	0.95	1.04	1
696	BTN	2	1.14	1.99	1.12	2.11	1.2	0.99	0.98	1.06	1.05
698	MYW	1.96	1.11	2.02	1.15	2.14	1.24	1.03	1.04	1.09	1.12
699	HUB	2.02	1.16	2.02	1.13	2.13	1.23	1	0.98	1.06	1.06
702	CVL	2.08	1.2	2	1.1	2.13	1.21	0.96	0.91	1.02	1.01
703	HGV	2.07	1.19	2.02	1.12	2.14	1.23	0.98	0.94	1.03	1.03
705	MCO	2.09	1.2	2.08	1.17	2.18	1.28	1	0.97	1.04	1.06
708	MLA	2.04	1.18	2.06	1.14	2.15	1.25	1.01	0.97	1.05	1.06
709	COA	2.09	1.21	2.05	1.13	2.14	1.23	0.98	0.93	1.03	1.01
710	COA	2.08	1.2	1.98	1.1	2.12	1.19	0.95	0.92	1.02	1
711	COA	2.09	1.21	2.02	1.12	2.13	1.21	0.96	0.92	1.02	1
715	KVG	2.09	1.21	1.94	1.08	2.11	1.17	0.93	0.89	1.01	0.97

Appendix C-4d: Annual wheat residue (t/ha) from canola-wheat-fallow averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{lp}, SN_l).

Poly #	Soil name	BL		SN_l		SN_{lp}		SN_l/BL		SN_{lp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	2.16	1.09	2.47	0.97	1.69	0.73	1.14	0.89	0.78	0.67
3	DON	2.25	1.05	2.49	1.04	1.8	0.76	1.11	0.99	0.8	0.73
4	HZM	2.16	0.88	2.37	0.91	1.73	0.77	1.1	1.04	0.8	0.88
5	DON	2.17	0.84	2.36	0.91	1.72	0.78	1.09	1.08	0.79	0.93
6	ESH	2.37	1.05	2.51	1.08	1.91	0.81	1.06	1.04	0.81	0.77
7	COS	2.15	1.04	2.45	0.98	1.71	0.74	1.14	0.94	0.8	0.71
9	BBN	2.06	0.87	2.37	0.96	1.75	0.77	1.15	1.1	0.85	0.89
10	BBN	2.1	0.84	2.47	1.05	1.72	0.79	1.18	1.25	0.82	0.94
11	ESH	2.2	0.92	2.47	1.09	1.75	0.82	1.13	1.19	0.79	0.9
13	HZM	1.95	0.87	2.39	1	1.73	0.78	1.23	1.14	0.89	0.9
14	COS	1.97	0.82	2.35	0.97	1.76	0.77	1.19	1.18	0.89	0.94
15	ABT	1.92	0.82	2.38	0.99	1.74	0.79	1.24	1.2	0.91	0.96
19	HZM	1.93	0.83	2.39	1	1.73	0.79	1.24	1.21	0.9	0.96
20	LAD	2.04	0.88	2.43	1.06	1.71	0.81	1.19	1.21	0.84	0.92
22	COS	1.89	0.89	2.47	1.06	1.69	0.81	1.31	1.19	0.89	0.91
27	DON	1.77	0.82	2.17	0.93	1.67	0.78	1.23	1.14	0.95	0.95
28	HZM	2.14	1.02	2.45	0.99	1.73	0.75	1.14	0.98	0.81	0.74
32	HRT	2.21	0.96	2.22	1.04	1.71	0.82	1	1.08	0.77	0.86
33	HRT	2.17	0.94	2.26	1.04	1.71	0.82	1.04	1.1	0.79	0.87
36	COS	2.11	0.92	2.2	1.02	1.7	0.82	1.04	1.11	0.81	0.89
47	DON	2.22	0.99	2.47	1.15	1.8	0.88	1.11	1.16	0.81	0.88
48	DON	2.18	0.94	2.44	1.12	1.74	0.84	1.12	1.19	0.8	0.9
49	TAG	2.17	0.93	2.39	1.09	1.72	0.83	1.1	1.18	0.79	0.89
51	SAD	2.15	0.88	2.55	1.14	1.68	0.81	1.19	1.3	0.78	0.92
52	VVW	2.14	0.91	2.39	1.08	1.7	0.81	1.11	1.18	0.79	0.9
53	TAG	2.12	0.92	2.31	1.04	1.71	0.82	1.09	1.13	0.8	0.88
54	ESH	2.19	0.89	2.61	1.18	1.69	0.82	1.19	1.32	0.77	0.92
56	ZBR	2.34	1.12	2.5	1.2	1.92	0.9	1.07	1.07	0.82	0.8
59	FAL	2.49	1.16	2.72	1.31	2	0.98	1.09	1.13	0.8	0.85
60	BBN	2.59	1.17	2.84	1.34	2.08	0.99	1.1	1.14	0.8	0.84
61	RYF	2.25	0.96	2.58	1.19	1.76	0.86	1.15	1.23	0.78	0.9
62	DVS	2.42	1.2	2.77	1.45	2.01	1.09	1.14	1.21	0.83	0.91
64	JUH	2.47	1.19	2.77	1.39	2.01	1.04	1.12	1.17	0.82	0.87
68	HRT	2.37	1.12	2.7	1.36	1.93	1.02	1.14	1.21	0.82	0.91
70	JUH	2.33	1.04	2.55	1.22	1.84	0.93	1.1	1.17	0.79	0.89
71	BBN	2.27	0.97	2.54	1.16	1.77	0.86	1.12	1.2	0.78	0.89
72	BLY	2.26	0.97	2.58	1.19	1.77	0.87	1.14	1.23	0.78	0.9
73	RYF	2.23	0.92	2.42	1.04	1.74	0.81	1.08	1.13	0.78	0.88
74	JUH	2.27	0.93	2.39	1.05	1.73	0.81	1.05	1.13	0.76	0.87
75	DIG	2.59	1.28	2.42	1.16	2.02	0.81	0.93	0.91	0.78	0.64
76	JUH	2.41	1.12	2.58	1.24	1.9	0.94	1.07	1.11	0.79	0.84
77	LAD	2.46	1.14	2.43	1.13	1.9	0.83	0.99	0.99	0.77	0.72
78	ABT	2.46	1.16	2.54	1.21	1.93	0.9	1.03	1.04	0.78	0.77
80	BWY	2.61	1.33	2.69	1.28	2.03	0.94	1.03	0.96	0.78	0.71
81	HZM	2.61	1.32	2.52	1.22	2.04	0.87	0.96	0.92	0.78	0.66
83	BUD	2.64	1.35	2.64	1.26	2.06	0.9	1	0.94	0.78	0.67
84	HZM	2.63	1.33	2.68	1.26	2.06	0.91	1.02	0.95	0.78	0.69
87	NPA	2.61	1.29	2.67	1.31	2.14	0.85	1.03	1.02	0.82	0.66
88	FAL	2.63	1.31	2.63	1.28	2.15	0.86	1	0.98	0.82	0.66
89	JUH	2.27	1.14	2.55	1.1	1.81	0.74	1.13	0.96	0.8	0.65
91	HZM	2.6	1.34	2.84	1.49	2.17	0.75	1.09	1.11	0.84	0.56
93	DON	2.6	1.27	2.69	1.3	2.16	0.87	1.03	1.03	0.83	0.69
94	HRT	2.61	1.31	2.4	1.16	2.03	0.81	0.92	0.89	0.78	0.62
97	FAL	2.56	1.22	2.81	1.37	2.06	0.99	1.1	1.12	0.8	0.8
98	HZM	2.54	1.28	2.62	1.29	2.06	0.94	1.03	1	0.81	0.74

Appendix C-4d (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	2.55	1.28	2.85	1.43	2.05	0.96	1.12	1.11	0.8	0.75
101	FAL	2.57	1.3	2.75	1.34	2.04	0.97	1.07	1.03	0.79	0.75
102	WHW	2.63	1.35	2.76	1.32	2.06	0.95	1.05	0.98	0.78	0.71
103	ABT	2.57	1.23	2.71	1.25	2.05	0.9	1.05	1.02	0.8	0.73
104	HZM	2.57	1.25	2.74	1.28	2.06	0.91	1.06	1.03	0.8	0.73
105	CTE	2.6	1.31	2.75	1.34	2.11	0.94	1.06	1.03	0.81	0.72
107	ALC	2.55	1.26	2.6	1.25	2.07	0.86	1.02	0.99	0.81	0.69
108	HZM	2.52	1.17	2.69	1.23	2.06	0.9	1.07	1.05	0.81	0.76
109	PRV	2.55	1.23	2.67	1.26	2.09	0.92	1.05	1.02	0.82	0.75
110	CTE	2.62	1.34	2.74	1.37	2.14	0.96	1.05	1.02	0.82	0.72
112	ALC	2.57	1.23	2.73	1.28	2.09	0.91	1.06	1.04	0.81	0.74
130	DVS	2.39	1.25	2.46	1.17	1.94	1.01	1.03	0.93	0.81	0.81
132	CTE	2.18	1.12	2.03	1.02	2.07	1.04	0.93	0.91	0.95	0.93
133	BBN	2.53	1.2	2.56	1.21	1.96	0.91	1.01	1.01	0.78	0.76
135	DVS	2.52	1.16	2.64	1.24	1.99	0.94	1.05	1.07	0.79	0.81
144	BBN	2.1	0.97	2	0.87	1.74	0.78	0.95	0.9	0.83	0.81
170	HUB	2.08	0.99	2.32	0.91	1.7	0.71	1.12	0.92	0.82	0.72
171	HUB	2.29	1.05	2.21	0.99	1.76	0.83	0.96	0.94	0.77	0.78
172	KTH	2.37	1.26	2.4	1.23	1.83	0.88	1.01	0.97	0.77	0.7
173	CUL	2.34	1.28	2.41	1.26	1.85	0.89	1.03	0.99	0.79	0.7
176	HRT	2.88	1.35	2.6	1.24	1.72	0.79	0.9	0.92	0.6	0.59
177	HRT	2.69	1.23	2.48	1.11	1.75	0.85	0.92	0.9	0.65	0.69
178	HPE	2.96	1.51	2.44	1.09	1.69	0.76	0.83	0.72	0.57	0.5
180	KNZ	2.86	1.43	2.51	1.15	1.69	0.78	0.88	0.8	0.59	0.54
181	COS	2.86	1.45	2.65	1.25	1.67	0.78	0.93	0.86	0.58	0.54
182	ATO	2.93	1.48	2.36	1	1.7	0.76	0.8	0.68	0.58	0.51
185	UCS	2.94	1.47	2.37	1.02	1.7	0.76	0.81	0.69	0.58	0.51
189	CUL	2.89	1.36	2.6	1.24	1.72	0.79	0.9	0.91	0.59	0.58
192	COA	2.63	1.29	2.5	1.21	1.75	0.8	0.95	0.93	0.67	0.62
193	MLA	2.52	1.23	2.51	1.18	1.75	0.76	0.99	0.96	0.69	0.62
194	MLA	2.94	1.47	2.47	1.13	1.72	0.77	0.84	0.77	0.58	0.53
196	LNN	3.02	1.55	2.23	0.88	1.7	0.74	0.74	0.57	0.56	0.47
197	COA	3.03	1.59	2.3	1.03	1.68	0.73	0.76	0.64	0.55	0.46
198	COA	2.92	1.45	2.53	1.21	1.71	0.77	0.87	0.84	0.59	0.53
201	HRT	2.22	1.23	2.38	1.26	1.86	0.89	1.07	1.02	0.84	0.72
211	ZOR	2.9	1.49	2.72	1.32	1.64	0.75	0.94	0.88	0.57	0.5
212	ABC	2.9	1.49	2.71	1.32	1.63	0.74	0.94	0.89	0.56	0.5
215	ABC	2.89	1.49	2.63	1.27	1.64	0.74	0.91	0.85	0.57	0.5
218	KNZ	2.82	1.51	2.26	1.08	1.61	0.72	0.8	0.71	0.57	0.48
221	EGL	2.93	1.54	2.87	1.39	1.6	0.76	0.98	0.9	0.55	0.5
224	ABC	2.9	1.53	2.76	1.34	1.6	0.76	0.95	0.88	0.55	0.49
227	TNW	2.82	1.53	2.31	1.11	1.59	0.72	0.82	0.72	0.57	0.47
231	ABC	2.84	1.55	2.28	1.08	1.61	0.73	0.8	0.69	0.57	0.47
232	MLA	2.77	1.5	2.17	1.05	1.6	0.72	0.78	0.7	0.58	0.48
233	KNZ	2.8	1.5	2.3	1.11	1.6	0.73	0.82	0.74	0.57	0.48
236	ABC	2.91	1.54	2.64	1.21	1.63	0.74	0.9	0.79	0.56	0.48
240	KNZ	2.85	1.54	2.38	1.13	1.63	0.74	0.83	0.73	0.57	0.48
246	GDI	2.91	1.53	2.57	1.19	1.71	0.8	0.88	0.78	0.59	0.52
248	GDI	2.9	1.54	2.48	1.16	1.81	0.85	0.86	0.75	0.63	0.55
250	ABC	2.9	1.65	2.56	1.16	1.78	0.76	0.88	0.71	0.61	0.46
252	UCS	2.95	1.53	2.42	1.07	1.67	0.75	0.82	0.7	0.56	0.49
253	COD	2.97	1.55	2.37	1.02	1.66	0.74	0.8	0.66	0.56	0.48
254	PIB	3.01	1.57	2.27	0.93	1.68	0.73	0.75	0.59	0.56	0.47
258	POK	3.02	1.66	2.22	0.95	1.67	0.74	0.74	0.58	0.55	0.45
259	RDW	3	1.63	2.4	1.06	1.65	0.74	0.8	0.65	0.55	0.45
261	NIT	2.99	1.65	2.49	1.13	1.63	0.74	0.83	0.69	0.55	0.45
264	COA	2.96	1.65	2.63	1.23	1.61	0.74	0.89	0.74	0.54	0.45

Appendix C-4d (Continued):

Poly #	Soil name	BL		SN_t		SN_φ		SN_t/BL		SN_φ/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	2.9	1.6	2.44	1.15	1.62	0.74	0.84	0.72	0.56	0.46
271	FLU	2.94	1.65	2.44	1.1	1.68	0.78	0.83	0.66	0.57	0.47
275	RDW	2.87	1.62	2.39	1.06	1.74	0.79	0.83	0.66	0.61	0.49
279	ABC	2.89	1.68	2.54	1.13	1.77	0.74	0.88	0.67	0.61	0.44
290	ABC	2.91	1.5	2.48	1.18	1.84	0.89	0.85	0.78	0.63	0.59
291	LCY	2.89	1.51	2.61	1.25	1.95	0.89	0.9	0.82	0.67	0.59
292	TMN	2.86	1.56	2.7	1.36	2.06	0.94	0.94	0.87	0.72	0.6
296	NIT	2.55	1.36	2.3	1.05	1.63	0.76	0.9	0.77	0.64	0.56
297	GOG	2.81	1.51	2.54	1.2	1.86	0.84	0.91	0.79	0.66	0.56
301	SDN	2.66	1.47	2.37	1.07	1.67	0.76	0.89	0.73	0.63	0.52
302	LCY	2.58	1.4	2.3	1.04	1.62	0.76	0.89	0.74	0.63	0.54
306	LCY	2.87	1.7	2.6	1.15	1.77	0.71	0.91	0.68	0.62	0.42
310	FRY	2.74	1.49	2.24	0.97	1.7	0.79	0.82	0.65	0.62	0.53
311	FRY	2.84	1.62	2.4	1.08	1.74	0.77	0.85	0.67	0.61	0.48
312	FRY	2.76	1.55	2.28	1.06	1.71	0.77	0.83	0.68	0.62	0.5
315	NTW	2.81	1.63	2.64	1.39	2.02	0.96	0.94	0.85	0.72	0.59
316	LCY	2.83	1.67	2.68	1.4	1.99	0.92	0.95	0.84	0.7	0.55
317	LCY	2.79	1.56	2.6	1.27	1.89	0.85	0.93	0.82	0.68	0.54
320	FRY	2.79	1.61	2.64	1.27	1.78	0.75	0.94	0.79	0.64	0.46
322	LCY	2.81	1.74	2.54	1.22	1.95	0.89	0.9	0.7	0.69	0.51
323	LCY	2.81	1.72	2.56	1.23	1.91	0.86	0.91	0.72	0.68	0.5
325	LCY	2.79	1.63	2.51	1.16	1.83	0.82	0.9	0.71	0.65	0.5
326	LCY	2.66	1.46	2.34	1.04	1.67	0.78	0.88	0.71	0.63	0.53
334	LCY	2.83	1.51	2.29	0.9	1.72	0.8	0.81	0.6	0.61	0.53
335	FRY	2.79	1.67	2.42	1.1	1.91	0.91	0.87	0.66	0.68	0.54
337	MGS	2.75	1.61	2.52	1.24	1.83	0.82	0.92	0.77	0.67	0.51
339	LFN	2.75	1.61	2.54	1.27	1.83	0.81	0.92	0.79	0.66	0.5
341	MGS	2.8	1.63	2.45	1.09	1.83	0.85	0.87	0.67	0.65	0.52
342	LFN	2.85	1.58	2.41	0.97	1.78	0.82	0.85	0.62	0.63	0.52
343	FRY	2.88	1.57	2.4	0.91	1.75	0.81	0.83	0.58	0.61	0.52
344	BSU	2.86	1.66	2.55	1.08	1.71	0.79	0.89	0.65	0.6	0.47
345	SDN	2.88	1.68	2.59	1.09	1.68	0.78	0.9	0.65	0.58	0.46
346	PHS	2.85	1.55	2.38	0.94	1.72	0.8	0.84	0.6	0.6	0.52
347	SDN	2.74	1.5	2.27	1	1.66	0.79	0.83	0.66	0.61	0.53
348	SDN	2.75	1.49	2.24	0.96	1.69	0.8	0.81	0.64	0.61	0.54
350	LFN	2.7	1.42	2.23	0.95	1.62	0.78	0.83	0.67	0.6	0.55
351	LFN	2.81	1.59	2.48	1.06	1.66	0.78	0.88	0.67	0.59	0.49
352	RDW	2.82	1.59	2.52	1.06	1.64	0.76	0.9	0.67	0.58	0.48
354	BVH	2.75	1.58	2.6	1.34	1.78	0.76	0.95	0.85	0.65	0.48
356	EOR	2.64	1.53	2.15	0.9	1.7	0.72	0.81	0.59	0.64	0.47
357	EOR	2.72	1.55	2.44	1.1	1.74	0.75	0.9	0.71	0.64	0.48
359	RED	2.63	1.38	2.37	0.94	1.77	0.73	0.9	0.68	0.67	0.53
360	EOR	2.7	1.47	2.46	1.02	1.74	0.74	0.91	0.69	0.64	0.5
362	EOR	2.75	1.48	2.56	1.13	1.69	0.72	0.93	0.76	0.62	0.48
363	EOR	2.71	1.47	2.48	1.15	1.68	0.71	0.91	0.78	0.62	0.48
364	EOR	2.53	1.4	1.83	0.91	1.66	0.69	0.72	0.65	0.66	0.5
365	HND	2.57	1.39	2.13	1.04	1.68	0.7	0.83	0.75	0.65	0.5
366	DCY	2.59	1.37	2.31	1.06	1.71	0.71	0.89	0.77	0.66	0.52
367	HND	2.6	1.36	2.33	1.04	1.71	0.71	0.9	0.77	0.66	0.52
370	HND	2.5	1.29	2.48	1.21	1.72	0.73	0.99	0.94	0.69	0.57
371	WWT	2.5	1.32	2.33	1.03	1.79	0.68	0.93	0.78	0.71	0.52
372	EOR	2.53	1.29	2.31	0.94	1.78	0.7	0.91	0.73	0.7	0.54
374	EOR	2.58	1.44	2.16	0.88	1.73	0.7	0.84	0.61	0.67	0.49
375	WWT	2.54	1.43	2.15	0.9	1.76	0.68	0.85	0.63	0.69	0.47
376	HND	2.48	1.37	2.22	0.94	1.83	0.65	0.9	0.69	0.74	0.48
378	HND	2.44	1.31	2.25	0.95	1.9	0.62	0.92	0.73	0.78	0.48
392	AGS	2.78	1.53	2.22	1	1.7	0.83	0.8	0.65	0.61	0.54

Appendix C-4d (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	2.95	1.67	2.36	1	1.79	0.89	0.8	0.6	0.61	0.53
396	AGS	2.99	1.68	2.42	1.08	1.7	0.8	0.81	0.64	0.57	0.47
401	MGS	3.01	1.68	2.09	0.86	1.71	0.76	0.69	0.51	0.57	0.45
403	CMO	2.94	1.65	2.34	0.99	1.8	0.9	0.79	0.6	0.61	0.55
404	AGS	2.95	1.68	2.36	0.99	1.82	0.93	0.8	0.59	0.62	0.56
405	CMO	2.86	1.59	2.29	1	1.74	0.86	0.8	0.63	0.61	0.54
408	AGS	2.86	1.54	2.28	0.98	1.75	0.86	0.8	0.64	0.61	0.56
409	AGS	2.82	1.48	2.17	1.01	1.77	0.87	0.77	0.69	0.63	0.59
410	UCS	2.95	1.62	2.35	1.04	1.74	0.84	0.8	0.64	0.59	0.52
411	COA	3.01	1.7	2.71	1.28	1.61	0.73	0.9	0.75	0.53	0.43
412	CMO	2.78	1.44	2.05	0.94	1.7	0.82	0.74	0.65	0.61	0.57
416	WKN	3.03	1.69	2.06	0.85	1.71	0.75	0.68	0.5	0.56	0.45
418	MMO	3.06	1.68	2.2	0.96	1.66	0.72	0.72	0.57	0.54	0.42
420	TBY	3.09	1.7	2.08	0.9	1.63	0.68	0.68	0.53	0.53	0.4
421	HND	2.5	1.34	2.48	1.3	1.68	0.7	0.99	0.97	0.67	0.53
422	HCH	2.39	1.28	2.43	1.23	1.71	0.68	1.02	0.96	0.71	0.53
423	LET	2.31	1.25	2.33	1.13	1.76	0.63	1.01	0.91	0.76	0.51
425	HND	2.44	1.36	2.66	1.57	1.63	0.69	1.09	1.15	0.67	0.5
426	MMO	3.06	1.69	2.44	1.14	1.69	0.76	0.8	0.68	0.55	0.45
428	HND	2.26	1.3	2.49	1.41	1.76	0.69	1.1	1.09	0.78	0.53
429	FLU	2.99	1.68	2.76	1.34	1.59	0.72	0.92	0.79	0.53	0.43
430	MCO	2.88	1.55	2.37	1.14	1.69	0.8	0.82	0.73	0.59	0.51
431	AGS	2.78	1.44	2.16	1.06	1.77	0.86	0.77	0.74	0.64	0.6
432	KVG	2.95	1.57	2.34	1.13	1.71	0.78	0.79	0.72	0.58	0.5
433	POK	3.01	1.61	2.57	1.3	1.76	0.8	0.85	0.8	0.58	0.5
435	BTN	2.98	1.55	1.97	0.91	1.68	0.72	0.66	0.59	0.56	0.46
437	POK	2.87	1.49	2.1	1.01	1.74	0.8	0.73	0.68	0.6	0.54
439	COA	2.94	1.62	2.4	1.09	1.7	0.81	0.81	0.67	0.58	0.5
440	COA	3.11	1.72	2.14	0.98	1.65	0.69	0.69	0.57	0.53	0.4
441	MMO	3.07	1.7	2.22	0.99	1.69	0.73	0.72	0.58	0.55	0.43
442	WTB	3.12	1.69	2.62	1.33	1.73	0.79	0.84	0.78	0.55	0.46
443	HND	2.5	1.37	2.55	1.42	1.64	0.68	1.02	1.04	0.65	0.5
444	MET	2.55	1.38	2.32	1.25	1.62	0.67	0.91	0.91	0.64	0.48
449	KUR	2.09	1.18	2.3	1.2	1.74	0.68	1.1	1.02	0.83	0.57
451	MET	1.98	1.17	2.22	1.17	1.94	0.78	1.12	1	0.98	0.67
452	LET	1.98	1.13	2.21	1.13	1.81	0.71	1.12	1	0.91	0.63
453	CHN	1.98	1.19	2.22	1.2	2.02	0.83	1.12	1	1.02	0.69
457	MAB	1.91	1.15	2.15	1.17	2.03	0.87	1.12	1.01	1.06	0.75
458	MAB	1.81	1.05	2.04	1.09	1.84	0.82	1.13	1.04	1.02	0.79
460	WDN	1.84	1.09	2.08	1.12	1.92	0.85	1.13	1.03	1.04	0.78
461	BVL	1.92	1.18	2.17	1.19	2.07	0.89	1.13	1.01	1.08	0.76
463	HND	2	1.24	2.24	1.23	2.2	0.9	1.12	1	1.1	0.73
466	HND	1.97	1.16	2.21	1.16	1.9	0.77	1.12	1	0.97	0.66
467	WWT	2.02	1.16	2.25	1.17	1.78	0.69	1.11	1.01	0.88	0.6
471	HUK	2	1.2	2.26	1.24	1.95	0.8	1.13	1.03	0.97	0.67
472	MAB	1.79	1.08	1.98	1.1	1.88	0.92	1.11	1.01	1.05	0.85
473	HND	1.95	1.21	2.23	1.24	2.07	0.9	1.14	1.03	1.06	0.74
474	MAB	1.86	1.14	2.1	1.16	1.98	0.91	1.13	1.01	1.07	0.8
475	BVL	1.85	1.17	2.12	1.19	2.05	0.98	1.15	1.02	1.11	0.84
476	MAB	1.82	1.15	2	1.15	1.99	1.02	1.1	1	1.09	0.88
478	CCL	1.9	1.21	2.23	1.27	2.13	0.98	1.17	1.05	1.12	0.8
480	HUK	2.07	1.27	2.36	1.36	1.94	0.74	1.14	1.07	0.94	0.58
481	YTW	2.1	1.29	2.4	1.41	1.94	0.69	1.14	1.09	0.92	0.53
484	WWT	2.33	1.36	2.47	1.36	1.72	0.69	1.06	1.01	0.74	0.51
486	YTW	2.16	1.32	2.37	1.3	1.84	0.76	1.09	0.99	0.85	0.57
487	HUK	1.77	1.11	1.92	1.07	1.9	0.98	1.09	0.96	1.08	0.88
489	HUK	1.97	1.18	2.12	1.11	1.83	0.87	1.08	0.93	0.93	0.74

Appendix C-4d (Continued):

Poly #	Soil name	BL		SN_t		SN_{φ}		SN_t/BL		SN_{φ}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	2.5	1.38	2.54	1.4	1.61	0.67	1.02	1.02	0.64	0.49
496	MET	2.07	1.19	2.17	1.1	1.76	0.83	1.05	0.92	0.85	0.7
499	CVD	1.35	0.86	1.43	0.7	1.57	0.92	1.06	0.82	1.17	1.07
508	AGS	2.66	1.36	1.9	0.89	1.71	0.81	0.71	0.65	0.64	0.6
509	PHS	2.83	1.46	1.99	0.93	1.72	0.78	0.7	0.64	0.61	0.54
510	AGS	2.68	1.37	1.83	0.87	1.65	0.76	0.68	0.64	0.61	0.55
512	BVH	2.63	1.38	1.89	0.84	1.62	0.74	0.72	0.61	0.62	0.53
513	AGS	2.66	1.36	1.9	0.9	1.7	0.8	0.71	0.66	0.64	0.59
514	PHS	2.68	1.37	2.05	0.87	1.64	0.75	0.76	0.64	0.61	0.55
515	BVH	2.59	1.23	2.22	0.97	1.64	0.75	0.86	0.79	0.63	0.61
516	BVH	2.73	1.43	2.12	0.9	1.68	0.78	0.78	0.63	0.62	0.54
517	FLU	2.85	1.56	2.07	0.83	1.67	0.79	0.73	0.53	0.58	0.5
518	MGS	2.79	1.48	2.21	0.98	1.72	0.79	0.79	0.67	0.62	0.54
519	NVR	2.71	1.38	1.96	0.92	1.78	0.88	0.72	0.67	0.66	0.64
520	AGS	2.75	1.42	2.03	0.94	1.74	0.83	0.74	0.67	0.63	0.58
521	POK	2.83	1.48	2.16	0.99	1.71	0.77	0.76	0.67	0.61	0.52
523	PED	2.68	1.43	2.19	1	1.74	0.79	0.82	0.7	0.65	0.56
524	FLU	2.87	1.55	2.6	1.19	1.78	0.8	0.91	0.77	0.62	0.52
531	GDB	2.47	1.29	1.98	0.97	1.57	0.67	0.8	0.76	0.64	0.52
532	HKR	2.45	1.33	2.43	1.34	1.62	0.66	0.99	1.01	0.66	0.5
533	HND	2.46	1.38	2.32	1.18	1.57	0.69	0.95	0.85	0.64	0.5
534	MET	2.47	1.3	2.14	1.15	1.6	0.7	0.86	0.88	0.65	0.54
536	HND	2.5	1.28	2.13	1.15	1.61	0.71	0.85	0.9	0.64	0.55
537	BVH	2.5	1.26	2.25	1.1	1.61	0.7	0.9	0.87	0.64	0.56
538	HND	2.58	1.36	2.24	1.18	1.65	0.75	0.87	0.87	0.64	0.55
539	PHS	2.49	1.26	2.22	1.09	1.6	0.69	0.89	0.86	0.64	0.55
540	KLM	2.42	1.26	2.25	1.14	1.57	0.66	0.93	0.91	0.65	0.52
543	EOR	2.62	1.38	2.29	1.18	1.66	0.78	0.87	0.85	0.63	0.56
545	IRM	2.61	1.32	2.29	1.11	1.68	0.78	0.87	0.84	0.64	0.59
547	DEL	2.63	1.4	2.31	1.16	1.73	0.81	0.88	0.83	0.66	0.58
548	BVH	2.58	1.28	2.22	1.03	1.7	0.78	0.86	0.8	0.66	0.61
549	FLU	2.63	1.32	2.17	0.96	1.69	0.77	0.82	0.73	0.64	0.58
551	FLU	2.58	1.36	2.09	0.98	1.75	0.8	0.81	0.72	0.68	0.59
553	ATL	2.66	1.43	2.56	1.24	1.98	0.91	0.96	0.87	0.75	0.64
554	ATL	2.48	1.35	2.27	1.15	1.8	0.85	0.92	0.86	0.72	0.63
555	CYG	2.62	1.43	1.77	0.82	1.75	0.8	0.68	0.58	0.67	0.56
558	DEL	2.61	1.41	2.26	1.15	1.73	0.83	0.87	0.82	0.66	0.59
559	ATL	1.85	1.02	2.18	1.24	1.82	0.84	1.18	1.22	0.98	0.82
561	ATL	2	1.1	2.1	1.09	1.79	0.83	1.05	0.99	0.89	0.75
562	BGH	2.26	1.23	2.26	1.18	1.76	0.83	1	0.96	0.78	0.67
563	BSK	2.63	1.42	2.67	1.3	2.03	0.94	1.01	0.91	0.77	0.66
564	LET	1.69	0.94	1.61	0.83	1.51	0.72	0.95	0.89	0.89	0.76
565	DEL	2.63	1.41	2.32	1.16	1.75	0.84	0.88	0.82	0.67	0.59
566	DEL	2.39	1.3	2.45	1.22	1.8	0.86	1.02	0.94	0.75	0.66
567	BSK	2.56	1.42	2.39	1.24	1.91	0.89	0.93	0.87	0.75	0.63
568	DEL	2.66	1.48	2.38	1.27	1.75	0.84	0.9	0.86	0.66	0.57
569	IRM	2.61	1.44	2.41	1.26	1.86	0.87	0.92	0.88	0.71	0.6
570	HAN	2.62	1.48	2.33	1.28	1.83	0.85	0.89	0.87	0.7	0.58
571	HAN	2.45	1.28	2.05	1.12	1.63	0.72	0.84	0.87	0.67	0.56
572	DVG	1.92	1.01	2.24	1.05	2.04	1	1.17	1.03	1.07	0.99
574	LET	2.57	1.45	2.29	1.27	1.95	0.88	0.89	0.87	0.76	0.61
575	WWT	2.33	1.4	2.24	1.22	2.01	0.98	0.96	0.87	0.86	0.7
576	DMH	2.46	1.42	2.2	1.21	1.85	0.83	0.9	0.86	0.75	0.58
577	BZR	2.04	1.08	2.13	1.06	1.81	0.87	1.04	0.98	0.89	0.8
578	HAN	2.32	1.37	2.1	1.13	1.79	0.76	0.9	0.83	0.77	0.56
579	LET	2.33	1.41	2.2	1.22	2.02	0.96	0.95	0.86	0.87	0.68
581	HKR	2.31	1.36	2.3	1.13	1.65	0.74	1	0.83	0.71	0.55

Appendix C-4d (Continued):

Poly #	Soil name	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	2.35	1.32	2.17	1.14	1.7	0.74	0.92	0.86	0.72	0.56
583	HAN	2.31	1.3	2.16	1.13	1.7	0.75	0.93	0.87	0.74	0.58
584	DMH	2.5	1.33	2.13	1.16	1.69	0.75	0.85	0.87	0.68	0.56
589	HAN	2.28	1.3	2.16	1.13	1.74	0.76	0.95	0.87	0.76	0.58
590	CHN	1.7	0.93	1.93	1	1.63	0.77	1.14	1.08	0.96	0.83
591	BVL	1.74	1.02	1.91	1.04	1.75	0.87	1.1	1.02	1.01	0.85
592	FMT	1.74	1.05	1.88	1.03	1.76	0.88	1.08	0.98	1.01	0.84
593	CVD	1.74	1.05	1.89	1.04	1.76	0.9	1.08	0.99	1.01	0.85
595	ATP	1.71	1.01	1.92	1.02	1.59	0.85	1.12	1.01	0.93	0.84
596	FMT	1.74	1.07	1.86	0.98	1.68	0.74	1.07	0.92	0.96	0.69
598	FMT	1.74	1.07	1.85	0.97	1.67	0.73	1.06	0.91	0.96	0.68
599	MAB	1.73	1.07	1.79	0.99	1.74	0.8	1.03	0.93	1	0.75
600	CVD	1.68	1.02	1.85	0.99	1.56	0.73	1.1	0.98	0.93	0.71
601	MAB	1.75	1.09	1.82	1.02	1.82	0.95	1.04	0.94	1.04	0.87
602	MAB	1.76	1.09	1.79	1	1.81	0.88	1.02	0.92	1.03	0.81
603	MAB	1.73	1.03	1.86	1	1.48	0.75	1.08	0.97	0.85	0.73
605	HDY	1.85	1.11	1.88	1.02	1.73	0.89	1.02	0.91	0.93	0.8
606	CVD	1.63	1.01	1.66	0.87	1.69	0.93	1.02	0.86	1.04	0.92
607	CVD	1.73	1.08	1.69	0.89	1.67	0.86	0.98	0.82	0.96	0.79
608	MCT	1.96	1.23	1.78	0.98	1.69	0.79	0.91	0.8	0.86	0.64
609	TIY	1.94	1.16	1.93	1.03	1.86	0.99	0.99	0.89	0.96	0.86
610	BVL	1.93	1.16	1.9	1.03	1.58	0.82	0.98	0.89	0.82	0.7
611	HUK	2	1.23	1.9	1.02	1.67	0.83	0.95	0.83	0.84	0.68
613	CCL	2.14	1.36	1.84	1.04	1.65	0.68	0.86	0.76	0.77	0.5
615	CVD	1.74	1.02	1.72	0.88	1.43	0.67	0.99	0.86	0.82	0.66
616	CHN	1.62	0.96	1.72	0.9	1.39	0.65	1.06	0.93	0.86	0.67
617	FMT	1.58	0.95	1.81	1.04	1.41	0.65	1.15	1.08	0.89	0.68
618	CHN	1.61	0.97	1.87	1.03	1.45	0.66	1.16	1.06	0.9	0.68
619	FMT	1.64	1.01	1.83	1.02	1.55	0.66	1.12	1.01	0.95	0.65
620	MAB	1.63	1	1.94	1.03	1.55	0.67	1.19	1.03	0.95	0.67
621	TTH	1.61	0.96	1.98	1.01	1.46	0.61	1.23	1.05	0.91	0.63
622	TTH	1.61	0.96	2.01	1.01	1.48	0.62	1.25	1.05	0.92	0.65
623	ZRB	1.62	0.97	2.06	1.01	1.5	0.63	1.27	1.04	0.93	0.65
624	THA	1.6	0.94	2.11	0.98	1.42	0.57	1.32	1.04	0.88	0.6
626	SIL	1.64	1.04	2.04	1.09	1.67	0.78	1.24	1.05	1.02	0.76
627	MAB	1.65	1.03	2.01	1.07	1.65	0.76	1.22	1.04	1	0.74
628	BVL	1.66	1.04	1.97	1.05	1.65	0.74	1.19	1.02	0.99	0.72
629	SIL	1.65	1.04	1.99	1.07	1.66	0.75	1.2	1.03	1	0.73
631	MAB	1.66	1.05	1.9	1.07	1.67	0.73	1.14	1.02	1.01	0.69
632	MAB	1.65	0.95	1.89	1	1.57	0.66	1.15	1.05	0.95	0.7
633	MAB	1.64	0.91	1.84	0.96	1.45	0.62	1.12	1.05	0.89	0.68
634	MAB	1.7	1.07	1.94	1.05	1.71	0.75	1.14	0.98	1.01	0.7
635	MAB	1.68	1.03	1.9	1.03	1.65	0.71	1.13	1	0.98	0.7
637	MSN	1.62	0.89	1.84	0.96	1.42	0.61	1.13	1.08	0.88	0.69
638	ZRB	1.67	1	1.89	1.01	1.62	0.7	1.13	1.01	0.97	0.7
639	PUR	1.67	0.96	1.84	1	1.4	0.65	1.1	1.04	0.84	0.68
641	MAB	1.65	0.94	1.73	0.88	1.44	0.62	1.05	0.94	0.87	0.66
642	MAB	1.58	0.93	1.61	0.77	1.34	0.6	1.02	0.83	0.85	0.64
643	CHN	1.75	1.03	1.64	0.81	1.51	0.65	0.94	0.79	0.86	0.63
645	DLB	1.67	0.94	1.78	0.93	1.48	0.69	1.07	0.99	0.89	0.74
648	CFD	1.86	1.1	1.85	1	1.43	0.77	1	0.91	0.77	0.7
649	BVL	1.92	1.16	1.9	1.13	1.44	0.65	0.99	0.98	0.75	0.56
650	MAB	1.98	1.21	1.91	1.08	1.46	0.68	0.97	0.89	0.74	0.56
651	RDM	2.13	1.3	1.93	1.03	1.54	0.71	0.91	0.79	0.72	0.54
653	LET	2.09	1.19	1.87	1.04	1.68	0.82	0.89	0.87	0.8	0.69
654	PUY	2.17	1.36	1.87	1.06	1.69	0.7	0.86	0.78	0.78	0.51
655	DEL	2.15	1.17	2.22	1.16	1.77	0.86	1.03	0.99	0.82	0.73

Appendix C-4d (Continued):

Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	1.94	1.06	1.88	1.02	1.59	0.79	0.96	0.96	0.82	0.75
657	LET	1.72	0.97	1.74	0.93	1.46	0.73	1.02	0.95	0.85	0.76
658	CMY	1.46	0.84	1.55	0.86	1.11	0.66	1.06	1.02	0.76	0.78
659	DEL	2.05	1.06	2.27	1.21	1.74	0.82	1.11	1.14	0.85	0.78
660	CVD	2.06	1.3	1.84	1.02	1.66	0.74	0.89	0.79	0.81	0.57
661	RDM	2.01	1.23	1.89	1.04	1.48	0.69	0.94	0.85	0.74	0.56
663	LET	1.7	0.98	1.7	0.93	1.34	0.69	1	0.96	0.79	0.71
664	RDM	1.92	1.11	1.79	0.99	1.5	0.73	0.93	0.89	0.78	0.66
666	PUR	1.67	0.96	1.82	0.98	1.41	0.65	1.09	1.02	0.85	0.68
667	LET	1.75	1.01	1.71	0.88	1.55	0.68	0.98	0.87	0.88	0.68
669	LOB	1.96	1.06	1.91	0.93	1.75	0.79	0.98	0.88	0.89	0.75
671	PHS	2.42	1.3	2.22	1.07	1.87	0.85	0.92	0.82	0.77	0.65
672	PED	2.5	1.35	2	0.95	1.8	0.82	0.8	0.7	0.72	0.61
673	MMO	2.44	1.31	1.8	0.84	1.73	0.79	0.74	0.64	0.71	0.6
675	BTN	2.54	1.34	2.18	1.01	1.73	0.77	0.86	0.76	0.68	0.57
676	CYG	2.73	1.47	2.49	1.15	1.77	0.8	0.91	0.78	0.65	0.54
677	BEN	2.5	1.34	1.86	0.87	1.73	0.78	0.74	0.64	0.69	0.58
680	PNC	1.72	0.83	1.61	0.76	1.63	0.71	0.94	0.92	0.94	0.86
681	CYG	2.12	1.1	1.81	0.86	1.7	0.76	0.85	0.78	0.8	0.69
682	BEN	2.06	1.03	1.78	0.84	1.66	0.72	0.86	0.81	0.8	0.7
683	HUB	2.39	1.16	2.06	1.05	1.65	0.7	0.86	0.9	0.69	0.61
684	CAR	1.78	0.84	1.6	0.76	1.61	0.68	0.9	0.91	0.9	0.81
686	LOB	1.84	0.95	1.76	0.85	1.69	0.75	0.96	0.89	0.92	0.79
689	CAR	1.75	0.87	1.61	0.78	1.61	0.71	0.92	0.9	0.92	0.81
690	RMY	2.27	1.16	1.94	0.92	1.68	0.73	0.86	0.79	0.74	0.63
691	HUB	1.94	0.91	1.73	0.87	1.6	0.66	0.89	0.96	0.83	0.73
692	BTN	2.2	1.08	1.88	0.92	1.64	0.68	0.85	0.85	0.74	0.63
693	RMY	2.72	1.44	2.49	1.16	1.76	0.78	0.92	0.8	0.65	0.54
694	HUB	2.6	1.31	2.15	1.04	1.7	0.74	0.83	0.79	0.65	0.56
695	BTN	2.79	1.4	2.04	0.99	1.68	0.72	0.73	0.7	0.6	0.51
696	BTN	2.69	1.34	2.44	1.27	1.77	0.79	0.91	0.95	0.66	0.59
698	MYW	2.4	1.12	2.54	1.38	1.79	0.8	1.06	1.24	0.75	0.72
699	HUB	2.75	1.41	2.67	1.34	1.98	0.89	0.97	0.96	0.72	0.64
702	CVL	3.08	1.65	2.67	1.36	1.8	0.82	0.87	0.83	0.59	0.5
703	HGV	2.97	1.58	2.77	1.35	2.05	0.92	0.93	0.85	0.69	0.58
705	MCO	3.02	1.65	3.16	1.47	2.61	1.2	1.05	0.89	0.86	0.73
708	MLA	2.77	1.43	2.78	1.34	2.04	0.91	1	0.93	0.74	0.64
709	COA	2.93	1.5	2.64	1.33	1.81	0.81	0.9	0.88	0.62	0.54
710	COA	3.02	1.61	2.52	1.22	1.8	0.78	0.83	0.76	0.59	0.49
711	COA	3.01	1.58	2.57	1.26	1.83	0.81	0.85	0.8	0.61	0.51
715	KVG	3.05	1.63	2.25	1.02	1.67	0.71	0.74	0.63	0.55	0.43

Appendix C-4e: Annual winter wheat residue (t/ha) from winter wheat-fallow averaged by Soil Landscape Polygones in Alberta under current atmospheric CO_2 level (BL) and future climate at atmospheric CO_2 concentration two times the current level (SN_{lp}, SN_l).

Poly #	Soil name	BL		SN_l		SN_{lp}		SN_l/BL		SN_{lp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
2	FAL	1.21	1.09	1.71	1.36	1.92	1.1	1.42	1.25	1.59	1.02
3	DON	1.27	1.12	1.72	1.34	1.76	1.29	1.35	1.2	1.38	1.15
4	HZM	1.26	1.12	1.85	1.36	1.73	1.44	1.47	1.21	1.37	1.28
5	DON	1.29	1.15	1.87	1.36	1.7	1.51	1.46	1.19	1.32	1.31
6	ESH	1.32	1.16	1.75	1.34	1.66	1.43	1.32	1.16	1.26	1.23
7	COS	1.25	1.12	1.72	1.35	1.87	1.19	1.38	1.21	1.5	1.06
9	BBN	1.36	1.22	1.69	1.34	1.71	1.38	1.24	1.1	1.25	1.13
10	BBN	1.44	1.29	1.65	1.33	1.75	1.51	1.15	1.03	1.22	1.17
11	ESH	1.44	1.3	1.73	1.35	1.71	1.49	1.2	1.04	1.18	1.15
13	HZM	1.39	1.25	1.68	1.33	1.77	1.36	1.21	1.07	1.27	1.09
14	COS	1.43	1.28	1.62	1.33	1.68	1.39	1.13	1.04	1.17	1.09
15	ABT	1.45	1.3	1.61	1.32	1.68	1.38	1.11	1.01	1.16	1.07
19	HZM	1.45	1.31	1.6	1.32	1.67	1.39	1.1	1.01	1.15	1.07
20	LAD	1.46	1.31	1.61	1.33	1.72	1.44	1.11	1.01	1.18	1.1
22	COS	1.47	1.32	1.6	1.31	1.68	1.37	1.09	0.99	1.14	1.04
27	DON	1.31	1.18	1.74	1.37	1.86	1.27	1.33	1.17	1.42	1.08
28	HZM	1.28	1.14	1.72	1.35	1.83	1.24	1.34	1.18	1.43	1.08
32	HRT	1.49	1.34	1.58	1.33	1.65	1.39	1.06	0.99	1.11	1.04
33	HRT	1.48	1.33	1.59	1.33	1.67	1.39	1.08	1	1.13	1.05
36	COS	1.42	1.28	1.63	1.35	1.69	1.37	1.14	1.06	1.19	1.07
47	DON	1.4	1.23	1.79	1.39	1.8	1.52	1.27	1.13	1.28	1.24
48	DON	1.42	1.28	1.71	1.35	1.74	1.47	1.2	1.06	1.22	1.15
49	TAG	1.44	1.3	1.66	1.35	1.74	1.46	1.15	1.04	1.2	1.13
51	SAD	1.47	1.32	1.61	1.34	1.82	1.56	1.1	1.01	1.24	1.18
52	VVW	1.46	1.31	1.62	1.33	1.73	1.46	1.11	1.02	1.19	1.11
53	TAG	1.46	1.32	1.61	1.33	1.69	1.4	1.1	1.01	1.15	1.06
54	ESH	1.46	1.32	1.62	1.34	1.82	1.59	1.11	1.02	1.25	1.21
56	ZBR	1.4	1.22	1.71	1.38	1.74	1.48	1.22	1.13	1.25	1.22
59	FAL	1.39	1.22	1.93	1.46	1.79	1.68	1.39	1.19	1.29	1.38
60	BBN	1.41	1.25	1.91	1.49	1.78	1.82	1.35	1.2	1.27	1.46
61	RYF	1.44	1.29	1.75	1.35	1.75	1.53	1.21	1.05	1.22	1.19
62	DVS	1.27	1.13	2.21	1.37	1.63	1.42	1.74	1.21	1.29	1.25
64	JUH	1.34	1.2	2.05	1.41	1.71	1.55	1.52	1.18	1.27	1.3
68	HRT	1.32	1.18	2.07	1.37	1.66	1.46	1.57	1.15	1.26	1.24
70	JUH	1.4	1.26	1.95	1.36	1.66	1.45	1.39	1.08	1.18	1.16
71	BBN	1.44	1.29	1.79	1.36	1.71	1.5	1.24	1.05	1.19	1.16
72	BLY	1.43	1.28	1.77	1.35	1.74	1.52	1.24	1.05	1.22	1.19
73	RYF	1.42	1.28	1.78	1.35	1.68	1.47	1.25	1.06	1.18	1.15
74	JUH	1.48	1.33	1.81	1.35	1.65	1.45	1.22	1.02	1.12	1.09
75	DIG	1.4	1.24	1.86	1.4	1.7	1.48	1.33	1.14	1.21	1.2
76	JUH	1.41	1.26	1.91	1.38	1.67	1.45	1.35	1.1	1.19	1.15
77	LAD	1.43	1.28	1.85	1.39	1.69	1.47	1.29	1.09	1.18	1.15
78	ABT	1.41	1.26	1.88	1.4	1.69	1.47	1.33	1.11	1.2	1.17
80	BWY	1.42	1.25	1.62	1.43	1.73	1.39	1.14	1.15	1.22	1.12
81	HZM	1.42	1.25	1.81	1.43	1.73	1.48	1.27	1.14	1.22	1.18
83	BUD	1.44	1.27	1.63	1.44	1.75	1.45	1.13	1.13	1.22	1.14
84	HZM	1.45	1.28	1.57	1.44	1.76	1.43	1.09	1.13	1.21	1.12
87	NPA	1.38	1.2	1.59	1.32	1.6	1.39	1.15	1.1	1.16	1.16
88	FAL	1.39	1.21	1.64	1.34	1.62	1.41	1.18	1.11	1.17	1.17
89	JUH	1.26	1.1	1.65	1.33	1.8	1.18	1.31	1.21	1.43	1.07
91	HZM	1.38	1.12	1.43	1.23	1.5	1.31	1.03	1.1	1.09	1.16
93	DON	1.36	1.19	1.55	1.31	1.58	1.37	1.14	1.1	1.15	1.15
94	HRT	1.4	1.24	1.89	1.42	1.71	1.5	1.35	1.14	1.22	1.21
97	FAL	1.46	1.29	1.86	1.49	1.84	1.73	1.28	1.15	1.27	1.34
98	HZM	1.51	1.31	1.69	1.48	1.88	1.71	1.12	1.13	1.25	1.3

Appendix C-4e (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
99	CUL	1.63	1.45	1.75	1.55	2.09	1.89	1.08	1.07	1.28	1.3
101	FAL	1.45	1.28	1.72	1.45	1.79	1.51	1.19	1.13	1.24	1.18
102	WHW	1.48	1.31	1.54	1.47	1.82	1.48	1.04	1.12	1.23	1.13
103	ABT	1.49	1.31	1.59	1.42	1.79	1.5	1.07	1.08	1.21	1.14
104	HZM	1.52	1.34	1.6	1.44	1.82	1.56	1.06	1.08	1.2	1.16
105	CTE	1.59	1.41	1.69	1.51	1.91	1.75	1.06	1.07	1.2	1.24
107	ALC	1.42	1.23	1.67	1.38	1.7	1.47	1.17	1.12	1.2	1.19
108	HZM	1.5	1.32	1.59	1.41	1.79	1.55	1.06	1.06	1.2	1.17
109	PRV	1.52	1.33	1.63	1.44	1.8	1.61	1.08	1.08	1.19	1.21
110	CTE	1.64	1.45	1.73	1.55	1.93	1.85	1.06	1.07	1.18	1.28
112	ALC	1.56	1.38	1.63	1.46	1.83	1.64	1.04	1.06	1.18	1.19
130	DVS	1.12	0.93	1.31	1.18	1.44	1.19	1.17	1.27	1.29	1.28
132	CTE	1.14	0.81	1.3	1.16	1.42	1.17	1.14	1.42	1.24	1.44
133	BBN	1.46	1.24	1.79	1.51	2	1.77	1.22	1.23	1.37	1.43
135	DVS	1.43	1.23	1.83	1.5	1.91	1.76	1.28	1.22	1.33	1.43
144	BBN	1.43	0.97	2.03	1.47	2.52	1.81	1.42	1.52	1.77	1.86
170	HUB	1.34	0.91	2.18	1.46	2.46	1.86	1.63	1.61	1.84	2.05
171	HUB	1.31	0.99	2.11	1.33	2.41	1.91	1.61	1.35	1.84	1.92
172	KTH	1.26	1.05	2.03	1.44	2.48	1.71	1.61	1.36	1.96	1.62
173	CUL	1.25	1.06	2	1.47	2.48	1.7	1.6	1.39	1.98	1.6
176	HRT	1.25	1.08	2.29	0.99	2.41	1.49	1.83	0.92	1.93	1.38
177	HRT	1.26	1.05	2.14	1.16	2.28	1.73	1.69	1.1	1.8	1.65
178	HPE	1.32	1.15	2.1	1.13	2.31	1.61	1.6	0.99	1.75	1.4
180	KNZ	1.28	1.1	2.2	1.16	2.26	1.73	1.72	1.06	1.76	1.58
181	COS	1.25	1.07	2.23	1.19	2.19	1.82	1.78	1.11	1.75	1.71
182	ATO	1.35	1.17	2.18	1.14	2.38	1.64	1.61	0.97	1.76	1.4
185	UCS	1.33	1.17	2.15	1.11	2.38	1.56	1.61	0.95	1.79	1.33
189	CUL	1.25	1.08	2.28	1	2.38	1.51	1.83	0.92	1.91	1.39
192	COA	1.25	1.06	2.11	1.18	2.4	1.56	1.69	1.11	1.93	1.47
193	MLA	1.23	1.05	2	1.2	2.32	1.53	1.62	1.14	1.88	1.46
194	MLA	1.28	1.13	2.07	1.06	2.33	1.45	1.61	0.94	1.81	1.29
196	LNN	1.41	1.25	2.1	1.12	2.43	1.55	1.49	0.9	1.72	1.24
197	COA	1.29	1.15	1.83	1.05	2.19	1.33	1.42	0.91	1.7	1.16
198	COA	1.25	1.1	1.98	1.04	2.35	1.38	1.59	0.95	1.89	1.26
201	HRT	1.25	1.06	1.99	1.54	2.48	1.75	1.59	1.45	1.99	1.65
211	ZOR	1.24	1.04	2.37	1.25	2.14	1.83	1.91	1.2	1.73	1.75
212	ABC	1.24	1.02	2.56	1.36	2.17	1.77	2.07	1.33	1.75	1.73
215	ABC	1.24	1.04	2.46	1.25	2.11	1.78	1.98	1.2	1.7	1.71
218	KNZ	1.23	1.08	2.52	1.2	2	1.57	2.05	1.11	1.63	1.45
221	EGL	1.21	1.06	2.57	1.63	2.36	1.7	2.12	1.55	1.95	1.61
224	ABC	1.21	1.06	2.6	1.55	2.3	1.68	2.15	1.46	1.9	1.59
227	TNW	1.21	1.07	2.63	1.28	2.02	1.55	2.18	1.2	1.67	1.45
231	ABC	1.24	1.1	2.58	1.27	2	1.54	2.09	1.16	1.62	1.4
232	MLA	1.2	1.06	2.57	1.29	1.87	1.5	2.15	1.21	1.57	1.41
233	KNZ	1.2	1.06	2.55	1.35	1.97	1.54	2.13	1.28	1.64	1.46
236	ABC	1.21	1.07	2.24	1.72	2.16	1.57	1.85	1.61	1.78	1.47
240	KNZ	1.23	1.09	2.48	1.4	2.04	1.56	2.01	1.29	1.66	1.44
246	GDI	1.23	1.08	2.23	1.53	2.28	1.65	1.82	1.41	1.86	1.52
248	GDI	1.24	1.09	2.3	1.24	2.4	1.76	1.86	1.14	1.94	1.62
250	ABC	1.29	1.14	2.19	1.5	2.06	1.71	1.7	1.31	1.6	1.5
252	UCS	1.32	1.16	2.26	1.17	2.3	1.67	1.71	1.01	1.74	1.44
253	COD	1.35	1.19	2.32	1.18	2.34	1.62	1.72	0.99	1.74	1.36
254	PIB	1.39	1.24	2.16	1.14	2.37	1.55	1.55	0.92	1.7	1.26
258	POK	1.47	1.32	2.05	1.25	2.15	1.49	1.39	0.95	1.46	1.13
259	RDW	1.37	1.22	2.33	1.21	2.28	1.55	1.7	0.99	1.66	1.26
261	NIT	1.35	1.21	2.54	1.26	2.31	1.59	1.88	1.04	1.71	1.32
264	COA	1.28	1.14	2.84	1.29	2.39	1.65	2.23	1.13	1.87	1.45

Appendix C-4e (Continued):

Poly #	Soil name	BL		SN_i		SN_{φ}		SN/BL		SN_{φ}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
268	KNZ	1.26	1.12	2.67	1.29	2.18	1.6	2.11	1.15	1.73	1.42
271	FLU	1.48	1.33	2.34	1.38	2.16	1.62	1.58	1.04	1.46	1.22
275	RDW	1.53	1.36	2.07	1.5	1.95	1.66	1.35	1.1	1.28	1.22
279	ABC	1.39	1.24	2.06	1.59	1.87	1.69	1.48	1.29	1.35	1.37
290	ABC	1.22	1.07	2.36	1.19	2.52	1.75	1.94	1.11	2.07	1.63
291	LCY	1.24	1.09	2.36	1.33	2.32	1.59	1.91	1.22	1.88	1.47
292	TMN	1.24	1.09	2.51	1.46	2.27	1.48	2.02	1.34	1.83	1.36
296	NIT	1.25	1.1	2.12	1.13	2.07	1.61	1.7	1.02	1.66	1.46
297	GOG	1.26	1.11	2.28	1.33	2.19	1.6	1.81	1.19	1.74	1.44
301	SDN	1.29	1.14	2.12	1.26	2.02	1.64	1.64	1.1	1.57	1.43
302	LCY	1.29	1.14	2.2	1.18	2.05	1.61	1.7	1.03	1.59	1.41
306	LCY	1.32	1.17	2.08	1.62	1.84	1.69	1.58	1.38	1.4	1.45
310	FRY	1.53	1.36	2.06	1.4	1.88	1.59	1.34	1.03	1.23	1.17
311	FRY	1.51	1.34	1.98	1.55	1.86	1.66	1.31	1.16	1.24	1.23
312	FRY	1.52	1.35	1.93	1.51	1.83	1.63	1.27	1.12	1.21	1.21
315	NTW	1.25	1.1	2.68	1.54	2.3	1.49	2.14	1.4	1.84	1.36
316	LCY	1.26	1.11	2.86	1.6	2.31	1.51	2.27	1.44	1.84	1.36
317	LCY	1.26	1.11	2.56	1.43	2.22	1.55	2.03	1.29	1.76	1.39
320	FRY	1.26	1.12	2.87	1.54	2.23	1.58	2.27	1.38	1.76	1.41
322	LCY	1.27	1.13	2.78	1.29	2.59	1.68	2.18	1.14	2.03	1.49
323	LCY	1.3	1.15	2.78	1.35	2.49	1.66	2.15	1.18	1.92	1.44
325	LCY	1.33	1.18	2.62	1.36	2.29	1.62	1.96	1.15	1.72	1.37
326	LCY	1.34	1.19	2.27	1.24	2.07	1.61	1.69	1.04	1.54	1.35
334	LCY	1.6	1.42	2.15	1.41	1.85	1.58	1.34	0.99	1.16	1.11
335	FRY	1.37	1.21	2.47	1.21	2.42	1.66	1.81	0.99	1.77	1.37
337	MGS	1.51	1.35	2.25	1.28	2.09	1.57	1.49	0.94	1.38	1.16
339	LFN	1.53	1.37	2.23	1.29	2.05	1.56	1.45	0.94	1.34	1.14
341	MGS	1.47	1.31	2.39	1.28	2.19	1.61	1.62	0.97	1.49	1.23
342	LFN	1.55	1.38	2.33	1.35	2.01	1.58	1.5	0.98	1.3	1.14
343	FRY	1.61	1.43	2.31	1.39	1.91	1.56	1.44	0.97	1.19	1.09
344	BSU	1.59	1.42	2.42	1.36	2.04	1.54	1.52	0.95	1.28	1.08
345	SDN	1.61	1.44	2.44	1.36	2.03	1.52	1.51	0.95	1.26	1.05
346	PHS	1.61	1.44	2.22	1.39	1.88	1.55	1.38	0.96	1.17	1.08
347	SDN	1.62	1.44	1.97	1.36	1.83	1.51	1.21	0.94	1.13	1.04
348	SDN	1.62	1.44	2.02	1.39	1.84	1.54	1.25	0.96	1.14	1.07
350	LFN	1.59	1.41	1.58	1.27	1.63	1.37	1	0.9	1.02	0.97
351	LFN	1.6	1.43	2.12	1.32	1.89	1.46	1.32	0.92	1.18	1.02
352	RDW	1.6	1.43	2.09	1.29	1.86	1.41	1.31	0.9	1.16	0.99
354	BVH	1.61	1.44	2.09	1.34	1.83	1.52	1.3	0.93	1.14	1.05
356	EOR	1.59	1.42	2.13	1.31	1.85	1.47	1.34	0.92	1.16	1.03
357	EOR	1.59	1.43	2.26	1.32	1.95	1.49	1.42	0.93	1.22	1.04
359	RED	1.6	1.44	2.63	1.33	2.13	1.47	1.64	0.92	1.33	1.02
360	EOR	1.61	1.45	2.57	1.33	2.1	1.48	1.6	0.92	1.3	1.02
362	EOR	1.55	1.39	2.2	1.25	1.91	1.37	1.42	0.9	1.24	0.98
363	EOR	1.53	1.38	2.04	1.22	1.84	1.34	1.33	0.89	1.21	0.97
364	EOR	1.62	1.46	1.63	1.28	1.69	1.41	1.01	0.87	1.05	0.96
365	HND	1.55	1.4	1.72	1.22	1.72	1.35	1.11	0.88	1.11	0.97
366	DCY	1.52	1.37	1.94	1.21	1.81	1.33	1.28	0.89	1.19	0.98
367	HND	1.53	1.37	2.04	1.22	1.85	1.34	1.34	0.89	1.21	0.98
370	HND	1.38	1.24	1.49	1.08	1.56	1.21	1.08	0.87	1.13	0.98
371	WWT	1.42	1.27	1.91	1.13	1.93	1.26	1.34	0.89	1.36	0.99
372	EOR	1.54	1.39	2.36	1.26	2.01	1.39	1.53	0.91	1.31	1
374	EOR	1.55	1.39	2.15	1.26	1.92	1.41	1.39	0.91	1.24	1.02
375	WWT	1.46	1.31	1.99	1.19	1.96	1.33	1.36	0.9	1.34	1.01
376	HND	1.37	1.23	1.9	1.09	2.09	1.23	1.39	0.89	1.53	1
378	HND	1.28	1.15	1.79	1.01	2.22	1.13	1.4	0.88	1.73	0.99
392	AGS	1.7	1.52	1.83	1.45	1.85	1.57	1.08	0.96	1.09	1.04

Appendix C-4e (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
393	LIZ	1.84	1.66	1.97	1.54	2	1.66	1.07	0.93	1.08	1
396	AGS	1.62	1.46	1.7	1.31	2.07	1.43	1.05	0.9	1.28	0.98
401	MGS	1.63	1.46	1.91	1.36	2.06	1.52	1.17	0.93	1.26	1.04
403	CMO	1.91	1.72	1.87	1.55	1.97	1.64	0.98	0.9	1.03	0.95
404	AGS	1.97	1.77	1.91	1.6	1.96	1.68	0.97	0.9	1	0.95
405	CMO	1.8	1.62	1.85	1.5	1.89	1.59	1.03	0.93	1.05	0.99
408	AGS	1.82	1.63	1.8	1.46	1.87	1.56	0.99	0.89	1.03	0.95
409	AGS	1.81	1.63	1.72	1.4	1.94	1.5	0.95	0.86	1.08	0.92
410	UCS	1.76	1.58	1.75	1.41	2	1.51	1	0.89	1.14	0.96
411	COA	1.44	1.29	1.39	1.12	2.22	1.21	0.97	0.87	1.55	0.94
412	CMO	1.66	1.49	1.69	1.3	1.82	1.39	1.02	0.87	1.1	0.93
416	WKN	1.61	1.45	1.77	1.32	2.04	1.46	1.09	0.91	1.26	1
418	MMO	1.37	1.23	1.82	1.12	2.02	1.33	1.32	0.91	1.47	1.08
420	TBY	1.27	1.14	1.7	1.02	1.93	1.22	1.33	0.89	1.52	1.07
421	HND	1.43	1.28	1.59	1.11	1.61	1.26	1.11	0.86	1.12	0.98
422	HCH	1.35	1.21	1.66	1.05	1.63	1.2	1.23	0.87	1.21	0.99
423	LET	1.27	1.15	1.72	1	1.78	1.14	1.35	0.87	1.4	1
425	HND	1.45	1.29	1.66	1.09	1.61	1.26	1.15	0.85	1.12	0.98
426	MMO	1.48	1.33	1.56	1.16	1.97	1.3	1.05	0.87	1.33	0.98
428	HND	1.35	1.21	2.22	1.02	1.85	1.35	1.64	0.84	1.37	1.12
429	FLU	1.39	1.24	1.3	1.06	2.24	1.15	0.94	0.85	1.62	0.92
430	MCO	1.59	1.43	1.51	1.22	2.05	1.32	0.95	0.85	1.29	0.92
431	AGS	1.73	1.55	1.62	1.31	1.94	1.42	0.94	0.85	1.12	0.92
432	KVG	1.48	1.32	1.45	1.12	1.82	1.29	0.98	0.85	1.23	0.98
433	POK	1.45	1.28	1.4	1.08	1.69	1.24	0.97	0.84	1.17	0.96
435	BTN	1.35	1.19	1.42	1.03	1.6	1.33	1.06	0.86	1.19	1.11
437	POK	1.55	1.38	1.53	1.17	1.76	1.36	0.99	0.85	1.14	0.99
439	COA	1.67	1.5	1.64	1.32	2.04	1.42	0.98	0.88	1.22	0.95
440	COA	1.28	1.14	1.5	0.99	1.76	1.13	1.17	0.87	1.37	0.99
441	MMO	1.44	1.29	1.64	1.15	1.93	1.29	1.14	0.89	1.34	1
442	WTB	1.46	1.31	1.46	1.1	1.68	1.24	1	0.84	1.15	0.95
443	HND	1.46	1.31	1.58	1.11	1.6	1.27	1.08	0.85	1.1	0.97
444	MET	1.49	1.34	1.52	1.15	1.56	1.28	1.02	0.86	1.04	0.95
449	KUR	1.28	1.14	2.49	0.97	1.5	1.15	1.95	0.85	1.18	1.01
451	MET	1.3	1.16	2.37	0.99	1.49	1.15	1.83	0.86	1.15	0.99
452	LET	1.26	1.13	2.8	0.96	1.45	1.11	2.21	0.85	1.15	0.98
453	CHN	1.32	1.18	2.04	1.02	1.57	1.19	1.55	0.86	1.2	1
457	MAB	1.35	1.2	1.69	1.06	1.6	1.21	1.25	0.88	1.19	1.01
458	MAB	1.34	1.18	1.75	1.07	1.64	1.21	1.3	0.9	1.22	1.02
460	WDN	1.34	1.19	1.72	1.07	1.63	1.21	1.28	0.9	1.22	1.02
461	BVL	1.34	1.2	1.8	1.05	1.69	1.22	1.34	0.88	1.26	1.02
463	HND	1.36	1.22	1.46	1.06	1.5	1.2	1.08	0.87	1.11	0.98
466	HND	1.29	1.15	2.54	0.98	1.53	1.15	1.97	0.85	1.19	1
467	WWT	1.27	1.13	2.79	0.96	1.51	1.15	2.19	0.84	1.19	1.01
471	HUK	1.29	1.16	2.64	0.98	1.92	1.29	2.04	0.85	1.48	1.11
472	MAB	1.35	1.16	1.87	1.06	1.76	1.22	1.38	0.91	1.3	1.05
473	HND	1.32	1.19	2.35	1.01	1.97	1.26	1.78	0.85	1.5	1.06
474	MAB	1.34	1.18	2.11	1.04	1.89	1.23	1.57	0.88	1.41	1.04
475	BVL	1.34	1.18	2.55	1.01	2.19	1.24	1.9	0.86	1.63	1.06
476	MAB	1.32	1.16	2.15	1.04	1.96	1.23	1.62	0.9	1.48	1.06
478	CCL	1.32	1.19	2.95	0.99	2.42	1.29	2.23	0.83	1.83	1.09
480	HUK	1.28	1.15	2.97	0.97	2.42	1.63	2.33	0.84	1.9	1.42
481	YTW	1.26	1.14	3.06	0.96	2.54	1.78	2.42	0.84	2.01	1.56
484	WWT	1.36	1.22	2.17	1.03	1.95	1.41	1.6	0.84	1.43	1.16
486	YTW	1.32	1.19	2.59	1	2.24	1.47	1.97	0.84	1.7	1.24
487	HUK	1.37	1.14	2.22	1	2.11	1.19	1.62	0.88	1.54	1.04
489	HUK	1.35	1.17	2.64	1	2.37	1.19	1.96	0.85	1.76	1.02

Appendix C-4e (Continued):

Poly #	Soil name	BL		SN_i		SN_w		SN_i/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
494	LHD	1.42	1.27	1.58	1.07	1.58	1.24	1.11	0.84	1.11	0.97
496	MET	1.35	1.19	2.74	1.01	2.45	1.16	2.04	0.85	1.82	0.98
499	CVD	1.28	1.08	1.58	0.9	2.01	1.02	1.24	0.84	1.58	0.95
508	AGS	1.67	1.5	1.69	1.28	1.76	1.38	1.01	0.85	1.05	0.92
509	PHS	1.53	1.36	1.54	1.15	1.75	1.37	1	0.85	1.14	1.01
510	AGS	1.53	1.37	1.62	1.19	1.73	1.28	1.06	0.87	1.13	0.93
512	BVH	1.53	1.37	1.63	1.18	1.62	1.27	1.07	0.86	1.06	0.93
513	AGS	1.65	1.48	1.68	1.27	1.78	1.37	1.02	0.86	1.08	0.92
514	PHS	1.51	1.35	1.65	1.17	1.73	1.25	1.09	0.87	1.14	0.93
515	BVH	1.52	1.34	1.66	1.19	1.93	1.25	1.1	0.89	1.27	0.93
516	BVH	1.51	1.33	1.62	1.14	1.76	1.24	1.08	0.86	1.17	0.93
517	FLU	1.52	1.35	1.62	1.14	1.62	1.24	1.06	0.84	1.06	0.92
518	MGS	1.49	1.31	1.57	1.11	1.9	1.24	1.05	0.85	1.27	0.95
519	NVR	1.77	1.59	1.72	1.34	1.81	1.44	0.97	0.84	1.02	0.91
520	AGS	1.64	1.46	1.63	1.23	1.82	1.37	0.99	0.85	1.11	0.94
521	POK	1.45	1.27	1.51	1.08	1.89	1.27	1.04	0.85	1.3	1
523	PED	1.46	1.27	1.59	1.09	1.95	1.21	1.09	0.86	1.33	0.96
524	FLU	1.34	1.16	1.46	1	2.3	1.15	1.09	0.86	1.71	0.99
531	GDB	1.48	1.33	1.54	1.15	1.53	1.24	1.05	0.86	1.03	0.93
532	HKR	1.43	1.28	1.62	1.08	1.6	1.27	1.13	0.85	1.12	0.99
533	HND	1.43	1.28	1.59	1.1	1.62	1.24	1.11	0.86	1.13	0.96
534	MET	1.48	1.32	1.59	1.14	1.65	1.27	1.08	0.86	1.12	0.96
536	HND	1.51	1.33	1.51	1.16	1.6	1.27	1	0.87	1.06	0.95
537	BVH	1.48	1.31	1.52	1.14	1.67	1.23	1.03	0.87	1.13	0.93
538	HND	1.55	1.36	1.53	1.19	1.65	1.29	0.99	0.87	1.06	0.95
539	PHS	1.47	1.31	1.51	1.13	1.64	1.22	1.03	0.86	1.12	0.93
540	KLM	1.44	1.29	1.44	1.11	1.51	1.2	1	0.86	1.05	0.93
543	EOR	1.59	1.39	1.59	1.21	1.75	1.31	1	0.87	1.1	0.94
545	IRM	1.57	1.38	1.63	1.21	1.85	1.29	1.04	0.88	1.18	0.94
547	DEL	1.57	1.37	1.62	1.19	1.77	1.3	1.03	0.87	1.12	0.96
548	BVH	1.53	1.33	1.65	1.18	1.88	1.26	1.08	0.88	1.23	0.95
549	FLU	1.51	1.32	1.64	1.15	1.9	1.24	1.09	0.87	1.26	0.94
551	FLU	1.52	1.32	1.65	1.15	1.76	1.26	1.09	0.87	1.16	0.96
553	ATL	1.49	1.29	1.54	1.14	1.62	1.27	1.03	0.88	1.09	0.98
554	ATL	1.9	1.6	1.66	1.2	1.72	1.34	0.88	0.75	0.91	0.84
555	CYG	1.51	1.34	1.68	1.14	1.64	1.27	1.11	0.85	1.09	0.95
558	DEL	2.17	1.8	1.64	1.26	1.69	1.34	0.76	0.7	0.78	0.75
559	ATL	1.5	1.43	1.6	1.13	1.7	1.32	1.07	0.79	1.14	0.92
561	ATL	1.52	1.33	1.82	1.1	1.91	1.39	1.2	0.83	1.26	1.05
562	BGH	1.94	1.64	1.61	1.19	1.69	1.32	0.83	0.72	0.87	0.8
563	BSK	1.57	1.35	1.53	1.15	1.61	1.28	0.97	0.85	1.03	0.95
564	LET	2.04	0.97	1.82	1.14	1.81	1.16	0.89	1.17	0.89	1.2
565	DEL	2.18	1.77	1.65	1.25	1.69	1.34	0.76	0.71	0.78	0.76
566	DEL	2.2	1.66	1.63	1.19	1.72	1.29	0.74	0.71	0.78	0.78
567	BSK	1.9	1.48	1.54	1.17	1.65	1.29	0.81	0.79	0.87	0.87
568	DEL	1.65	1.41	1.59	1.22	1.69	1.34	0.96	0.86	1.02	0.95
569	IRM	1.69	1.4	1.57	1.19	1.66	1.32	0.92	0.85	0.98	0.94
570	HAN	1.81	1.38	1.53	1.19	1.63	1.32	0.84	0.86	0.9	0.95
571	HAN	1.53	1.33	1.62	1.16	1.68	1.28	1.06	0.87	1.1	0.96
572	DVG	1.5	1.18	1.43	1.05	1.65	1.16	0.95	0.89	1.1	0.98
574	LET	1.96	1.31	1.47	1.15	1.59	1.28	0.75	0.87	0.81	0.97
575	WWT	1.99	1.38	1.43	1.06	1.71	1.17	0.72	0.77	0.86	0.85
576	DMH	1.86	1.31	1.53	1.14	1.64	1.26	0.82	0.87	0.88	0.96
577	BZR	1.58	1.09	1.49	1.05	1.82	1.15	0.94	0.96	1.15	1.05
578	HAN	1.82	1.28	1.61	1.13	1.67	1.24	0.89	0.88	0.92	0.97
579	LET	1.98	1.33	1.42	1.05	1.69	1.17	0.72	0.8	0.85	0.88
581	HKR	1.42	1.24	1.96	1.07	1.88	1.21	1.37	0.86	1.32	0.98

Appendix C-4e (Continued):

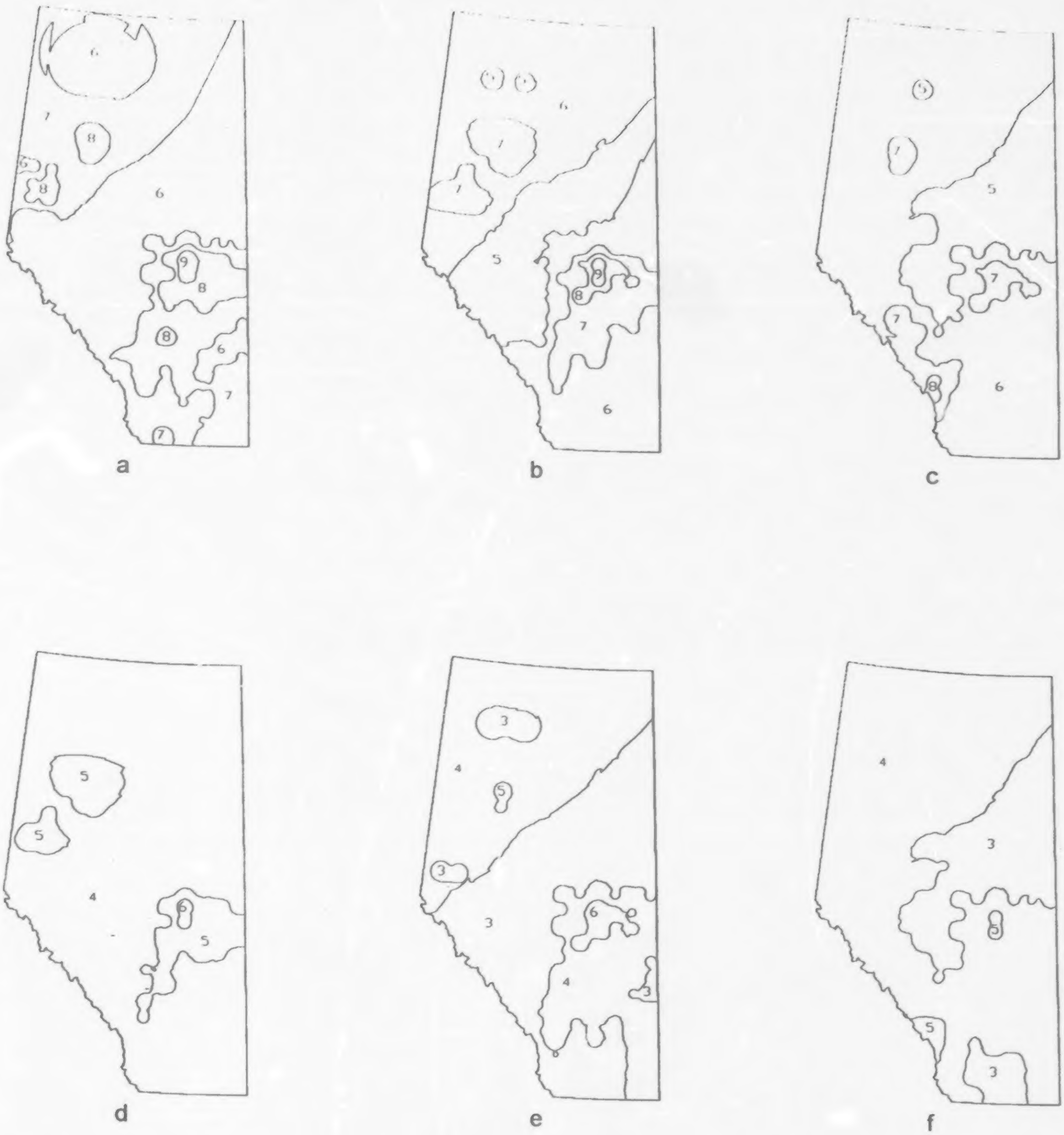
Poly #	Soil name	BL		SN_t		SN_w		SN_t/BL		SN_w/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
582	HAN	1.56	1.31	1.78	1.14	1.77	1.26	1.14	0.87	1.13	0.97
583	HAN	1.52	1.28	1.91	1.11	1.86	1.25	1.26	0.87	1.23	0.98
584	DMH	1.61	1.35	1.57	1.18	1.66	1.29	0.98	0.87	1.03	0.95
589	HAN	1.58	1.3	1.9	1.13	1.86	1.25	1.21	0.87	1.18	0.97
590	CHN	1.35	1.18	1.61	1.1	1.58	1.21	1.2	0.93	1.17	1.03
591	BVL	1.43	1.15	1.7	1.08	1.67	1.2	1.18	0.94	1.16	1.04
592	FMT	1.57	1.15	1.7	1.07	1.71	1.2	1.08	0.93	1.09	1.04
593	CVD	1.48	1.15	1.64	1.08	1.66	1.21	1.11	0.94	1.13	1.05
595	ATP	1.36	1.15	1.58	1.08	1.73	1.25	1.17	0.94	1.28	1.09
596	FMT	1.88	1.09	1.69	1.09	1.75	1.2	0.9	1	0.93	1.1
598	FMT	1.94	1.08	1.71	1.09	1.76	1.2	0.88	1.01	0.91	1.1
599	MAB	2.01	1.1	1.71	1.08	1.66	1.17	0.85	0.98	0.83	1.06
600	CVD	2.07	1.09	1.71	1.08	1.71	1.18	0.82	0.99	0.83	1.08
601	MAB	1.62	1.14	1.7	1.05	1.74	1.16	1.05	0.92	1.07	1.02
602	MAB	1.87	1.12	1.72	1.06	1.7	1.16	0.92	0.95	0.91	1.03
603	MAB	2.43	1.26	1.67	1.05	1.78	1.12	0.69	0.83	0.73	0.89
605	HDY	2.2	1.19	1.6	1.02	1.7	1.11	0.73	0.86	0.78	0.93
606	CVD	1.67	1.11	1.57	0.96	1.83	1.06	0.94	0.87	1.1	0.96
607	CVD	1.59	1.13	1.65	0.98	1.88	1.09	1.04	0.87	1.18	0.97
608	MCT	1.86	1.13	1.59	1.02	1.72	1.12	0.86	0.9	0.93	0.99
609	TIY	2.09	1.12	1.52	0.99	1.65	1.08	0.73	0.89	0.79	0.96
610	BVL	2.48	1.25	1.59	1.02	1.73	1.1	0.64	0.82	0.7	0.87
611	HUK	1.95	1.13	1.59	1.04	1.66	1.11	0.82	0.91	0.85	0.98
613	CCL	1.94	1.12	1.59	1.05	1.62	1.15	0.82	0.94	0.83	1.03
615	CVD	2.78	1.19	1.72	1.06	1.78	1.13	0.62	0.89	0.64	0.95
616	CHN	2.71	1.13	1.74	1.08	1.77	1.16	0.64	0.95	0.65	1.02
617	FMT	2.34	1.08	1.76	1.09	1.81	1.19	0.75	1.01	0.77	1.1
618	CHN	2.17	1.08	1.75	1.09	1.77	1.19	0.8	1.01	0.81	1.1
619	FMT	2.12	1.06	1.75	1.1	1.79	1.19	0.83	1.03	0.84	1.12
620	MAB	1.83	1.11	1.71	1.1	1.72	1.2	0.93	0.99	0.94	1.09
621	TTH	1.74	1.09	1.67	1.09	1.69	1.19	0.96	1	0.97	1.09
622	TTH	1.66	1.11	1.66	1.09	1.67	1.2	1	0.99	1	1.08
623	ZRB	1.49	1.13	1.64	1.09	1.63	1.2	1.1	0.97	1.09	1.06
624	THA	1.36	1.11	1.61	1.09	1.59	1.19	1.18	0.97	1.17	1.07
626	SIL	1.41	1.21	1.67	1.12	1.66	1.25	1.19	0.93	1.18	1.04
627	MAB	1.6	1.17	1.69	1.11	1.68	1.24	1.06	0.95	1.05	1.05
628	BVL	1.8	1.14	1.71	1.11	1.7	1.22	0.95	0.98	0.95	1.07
629	SIL	1.71	1.15	1.71	1.11	1.69	1.23	1	0.97	0.99	1.07
631	MAB	2.14	1.06	1.76	1.11	1.77	1.2	0.82	1.04	0.82	1.13
632	MAB	2.59	1.03	1.83	1.13	1.8	1.2	0.71	1.09	0.7	1.17
633	MAB	2.62	1.03	1.84	1.13	1.8	1.19	0.7	1.1	0.69	1.16
634	MAB	2.09	1.08	1.75	1.11	1.74	1.2	0.84	1.03	0.83	1.11
635	MAB	2.32	1.06	1.79	1.11	1.76	1.19	0.77	1.05	0.76	1.13
637	MSN	2.64	1.03	1.85	1.13	1.81	1.2	0.7	1.1	0.69	1.17
638	ZRB	2.39	1.05	1.8	1.12	1.77	1.2	0.75	1.06	0.74	1.14
639	PUR	2.18	1.01	1.84	1.12	1.75	1.16	0.85	1.11	0.8	1.15
641	MAB	2.67	1.03	1.8	1.11	1.77	1.18	0.68	1.07	0.66	1.14
642	MAB	2.91	1.05	1.78	1.1	1.72	1.17	0.61	1.05	0.59	1.12
643	CHN	2.66	1.06	1.75	1.07	1.75	1.14	0.66	1.01	0.66	1.08
645	DLB	1.9	1.02	1.79	1.11	1.73	1.15	0.94	1.09	0.91	1.13
648	CFD	2.83	1.46	1.61	1.01	1.87	1.07	0.57	0.69	0.66	0.73
649	BVL	3.09	1.03	1.74	1.1	1.73	1.18	0.56	1.06	0.56	1.14
650	MAB	2.51	1.08	1.7	1.09	1.69	1.16	0.68	1	0.67	1.07
651	RDM	1.74	1.09	1.64	1.09	1.61	1.15	0.94	1	0.92	1.05
653	LET	2.2	1.14	1.54	1.04	1.67	1.11	0.7	0.91	0.76	0.98
654	PUY	1.97	1.14	1.59	1.06	1.64	1.16	0.81	0.93	0.83	1.02
655	DEL	2.04	1.4	1.54	1.09	1.67	1.19	0.76	0.78	0.82	0.84

Appendix C-4e (Continued):

Poly #	Soil name	BL		SN_t		SN_{tp}		SN_t/BL		SN_{tp}/BL	
		NT	CT	NT	CT	NT	CT	NT	CT	NT	CT
656	PUY	2.16	1.11	1.57	1.05	1.64	1.12	0.73	0.95	0.76	1.01
657	LET	2.26	1.02	1.69	1.08	1.7	1.13	0.75	1.06	0.75	1.11
658	CMY	2.47	0.96	1.72	1.05	1.62	1.09	0.7	1.09	0.66	1.13
659	DEL	1.72	1.28	1.48	1.07	1.59	1.17	0.86	0.84	0.92	0.92
660	CVD	1.91	1.13	1.59	1.04	1.66	1.14	0.83	0.92	0.87	1.01
661	RDM	2.14	1.07	1.68	1.09	1.65	1.15	0.78	1.01	0.77	1.07
663	LET	2.41	1.01	1.71	1.07	1.67	1.12	0.71	1.06	0.69	1.11
664	RDM	2.3	1.05	1.63	1.06	1.65	1.12	0.71	1	0.72	1.06
666	PUR	2.2	1.01	1.83	1.11	1.75	1.16	0.83	1.1	0.8	1.15
667	LET	2.1	1.01	1.78	1.09	1.75	1.14	0.85	1.08	0.83	1.14
669	LOB	1.4	1.16	1.97	1.06	2.07	1.39	1.41	0.91	1.48	1.2
671	PHS	1.49	1.26	1.68	1.12	1.76	1.28	1.12	0.89	1.18	1.02
672	PED	1.52	1.3	1.68	1.13	1.71	1.27	1.11	0.87	1.13	0.98
673	MMO	1.54	1.29	1.72	1.13	1.73	1.25	1.12	0.88	1.12	0.97
675	BTN	1.49	1.22	1.57	1.05	2	1.19	1.05	0.86	1.34	0.98
676	CYG	1.39	1.17	1.52	1.01	2.24	1.15	1.09	0.86	1.62	0.98
677	BEN	1.53	1.29	1.67	1.11	1.76	1.24	1.1	0.86	1.15	0.96
680	PNC	1.7	1.08	1.99	1.17	2.03	1.17	1.17	1.08	1.19	1.08
681	CYG	1.59	1.19	1.83	1.13	1.9	1.23	1.15	0.95	1.2	1.03
682	BEN	1.65	1.17	1.76	1.1	1.88	1.19	1.06	0.94	1.14	1.02
683	HUB	1.58	1.21	1.4	1.01	1.62	1.19	0.89	0.84	1.03	0.99
684	CAR	1.76	1.13	1.84	1.13	1.89	1.16	1.05	1	1.08	1.03
686	LOB	1.51	1.11	2	1.1	2.08	1.3	1.32	0.99	1.37	1.17
689	CAR	1.72	1.27	1.83	1.23	1.84	1.43	1.06	0.97	1.07	1.12
690	RMY	1.62	1.23	1.6	1.07	1.86	1.2	0.99	0.87	1.15	0.98
691	HUB	1.82	1.29	1.51	1.07	1.56	1.23	0.83	0.83	0.86	0.95
692	BTN	1.76	1.29	1.43	1.02	1.65	1.16	0.81	0.79	0.94	0.9
693	RMY	1.41	1.17	1.47	1	2.19	1.15	1.04	0.86	1.56	0.98
694	HUB	1.45	1.18	1.45	1.03	1.75	1.23	1	0.87	1.2	1.04
695	BTN	1.34	1.14	1.41	1	1.56	1.29	1.05	0.88	1.17	1.13
696	BTN	1.37	1.14	1.38	1	1.54	1.21	1	0.88	1.12	1.06
698	MYW	1.35	1.06	1.42	1	1.49	1.21	1.05	0.94	1.11	1.14
699	HUB	1.32	1.11	1.36	0.98	1.52	1.17	1.03	0.89	1.15	1.06
702	CVL	1.41	1.25	1.43	1.06	1.64	1.22	1.01	0.85	1.16	0.97
703	HGV	1.28	1.13	1.4	1	1.61	1.18	1.09	0.88	1.25	1.04
705	MCO	1.17	1.04	1.17	0.92	1.28	1.07	1	0.89	1.09	1.03
708	MLA	1.21	1.06	1.59	1.02	1.83	1.26	1.32	0.96	1.52	1.19
709	COA	1.21	1.07	1.61	1	2.2	1.18	1.33	0.94	1.82	1.11
710	COA	1.3	1.15	1.51	1.01	1.82	1.19	1.16	0.88	1.4	1.04
711	COA	1.23	1.09	1.55	0.98	2.05	1.15	1.26	0.9	1.67	1.06
715	KVG	1.25	1.11	1.68	1.01	2.05	1.22	1.35	0.91	1.65	1.1

APPENDIX D

Model output maps of Alberta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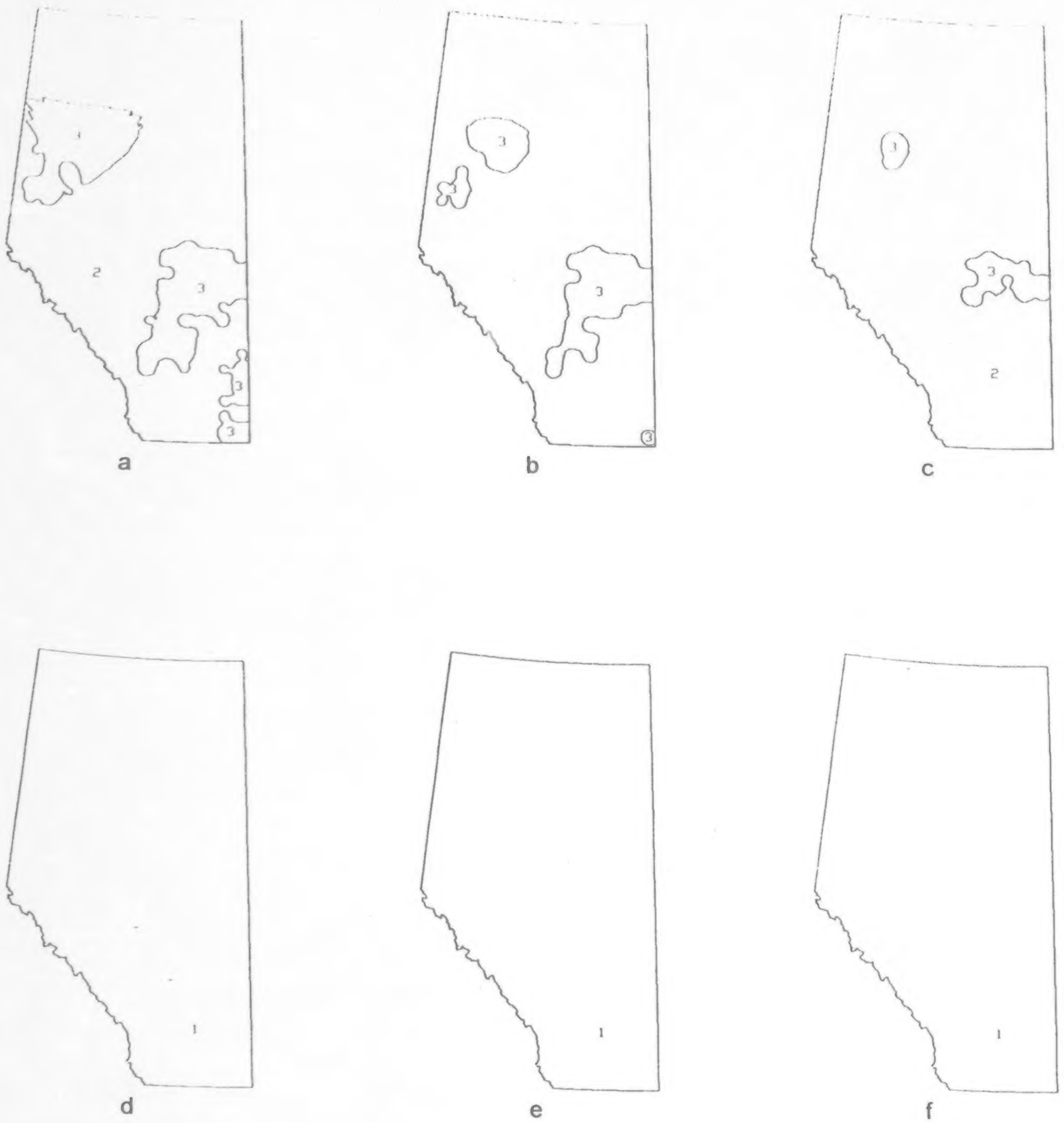
Appendix D-1a: Continuous spring wheat residue (t/ha) distribution across Alberta for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_t) and historical climate (right = BL): 1 = residue< 1.01; 2 = 1.00<residue<1.51; 3 = 1.50<residue<2.01; 4 = 2.00<residue<2.51; 5 = 2.50<residue<3.01; 6 = 3.00<residue<3.51; 7 = 3.50<residue<4.01; 8 = 4.00<residue.



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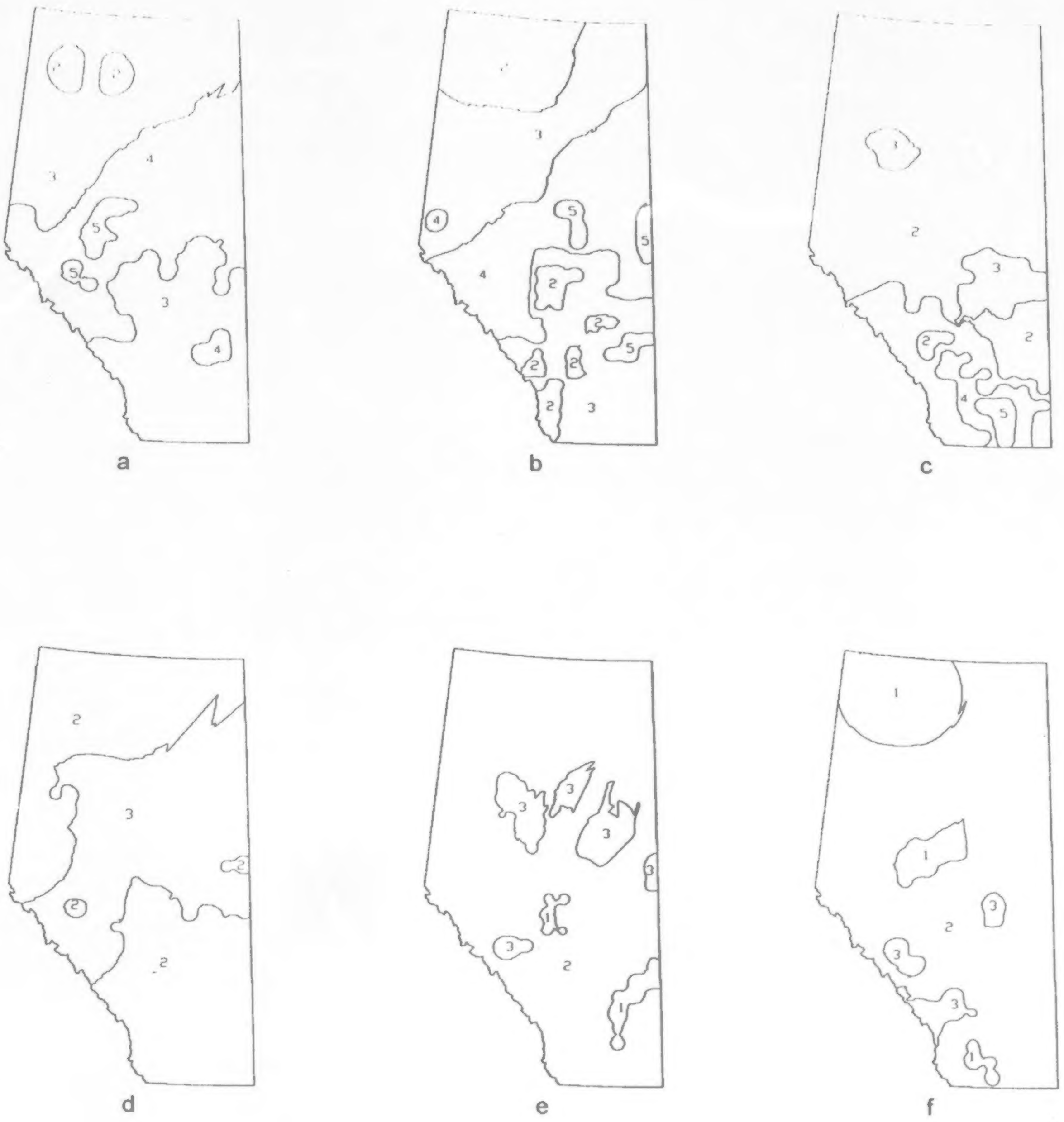
Appendix D-1b: Spring wheat residue (t/ha) distribution across Alberta from fallow-spring wheat for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_t) and historical climate (right = BL): 1 = residue<1.01; 2 = 1.00<residue<1.51; 3 = 1.50<residue<2.01; 4 = 2.00<residue<2.51; 5 = 3.00<residue<3.51; 6 = 3.50<residue<4.01; 7 = 4.00<residue<4.50; 8 = 4.50<residue.



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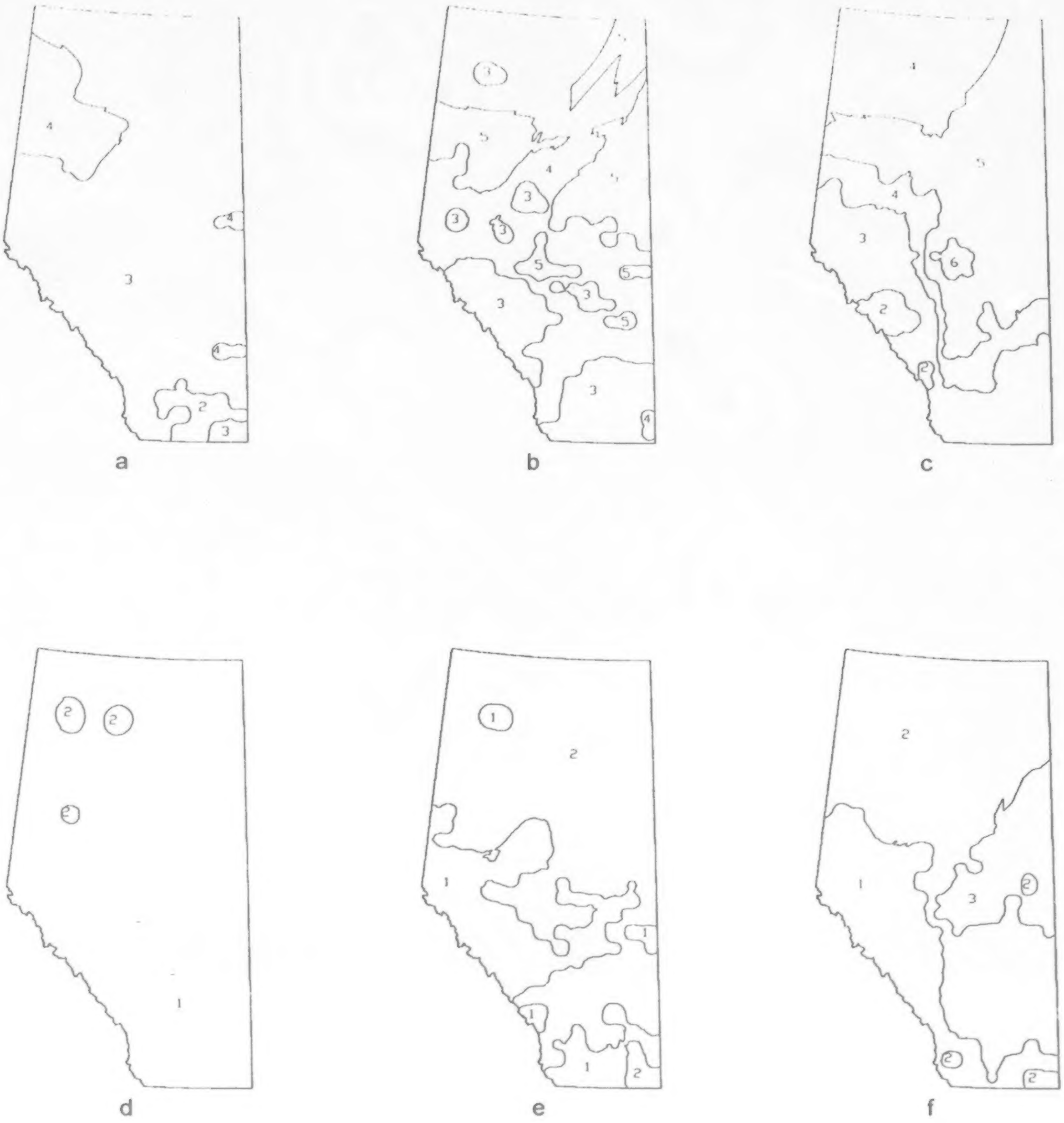
Appendix D-1c: Winter wheat residue (t/ha) distribution across Alberta from fallow-winter wheat for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_{t}) and historical climate (right = BL): 1 = residue<1.01; 2 = 1.00<residue<1.51; 3 = 1.50<residue<2.01; 4 = 2.00<residue<2.51; 5 = 2.50<residue<3.01; 6 = 3.00<residue<3.51; 7 = 3.50<residue.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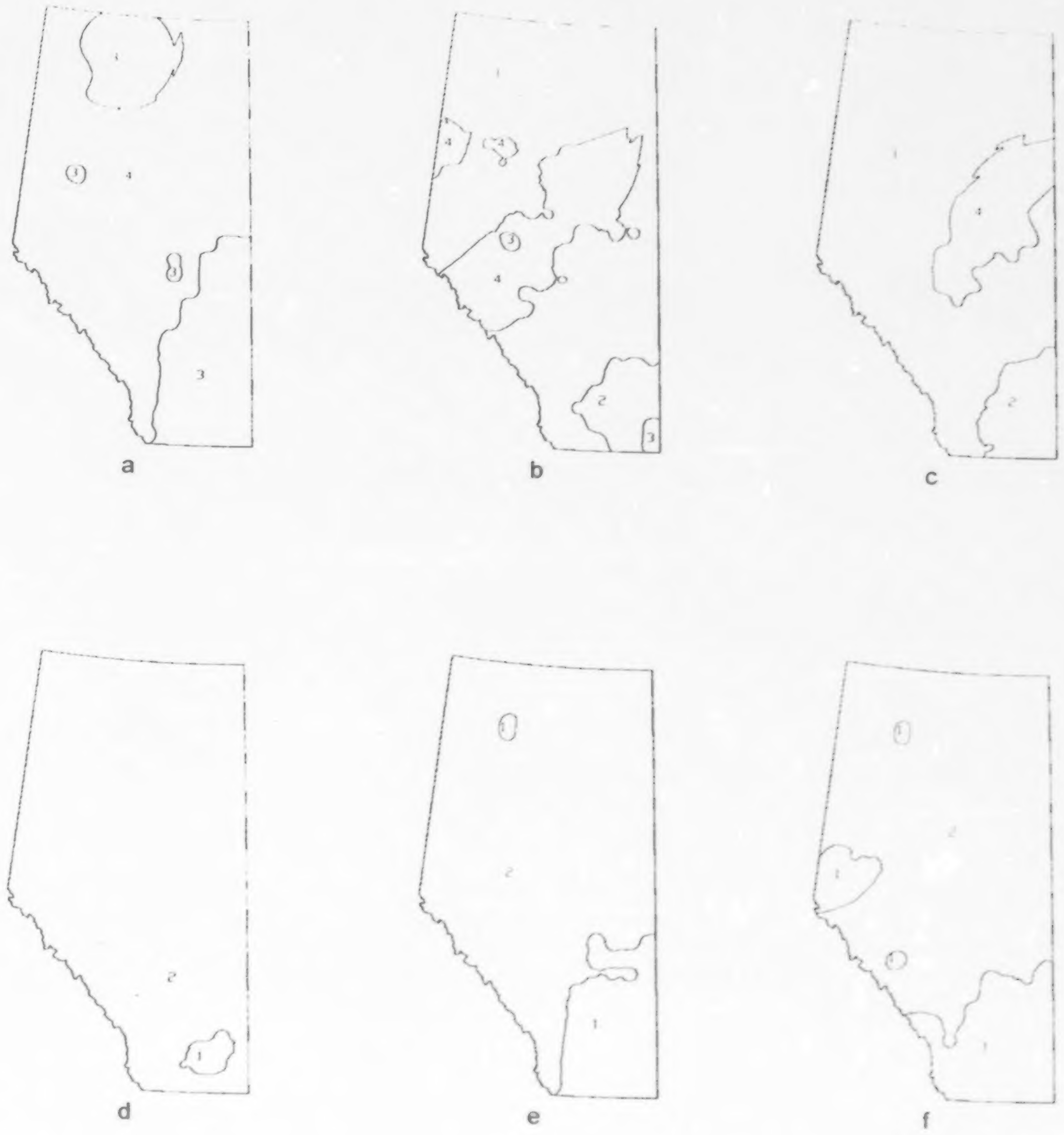
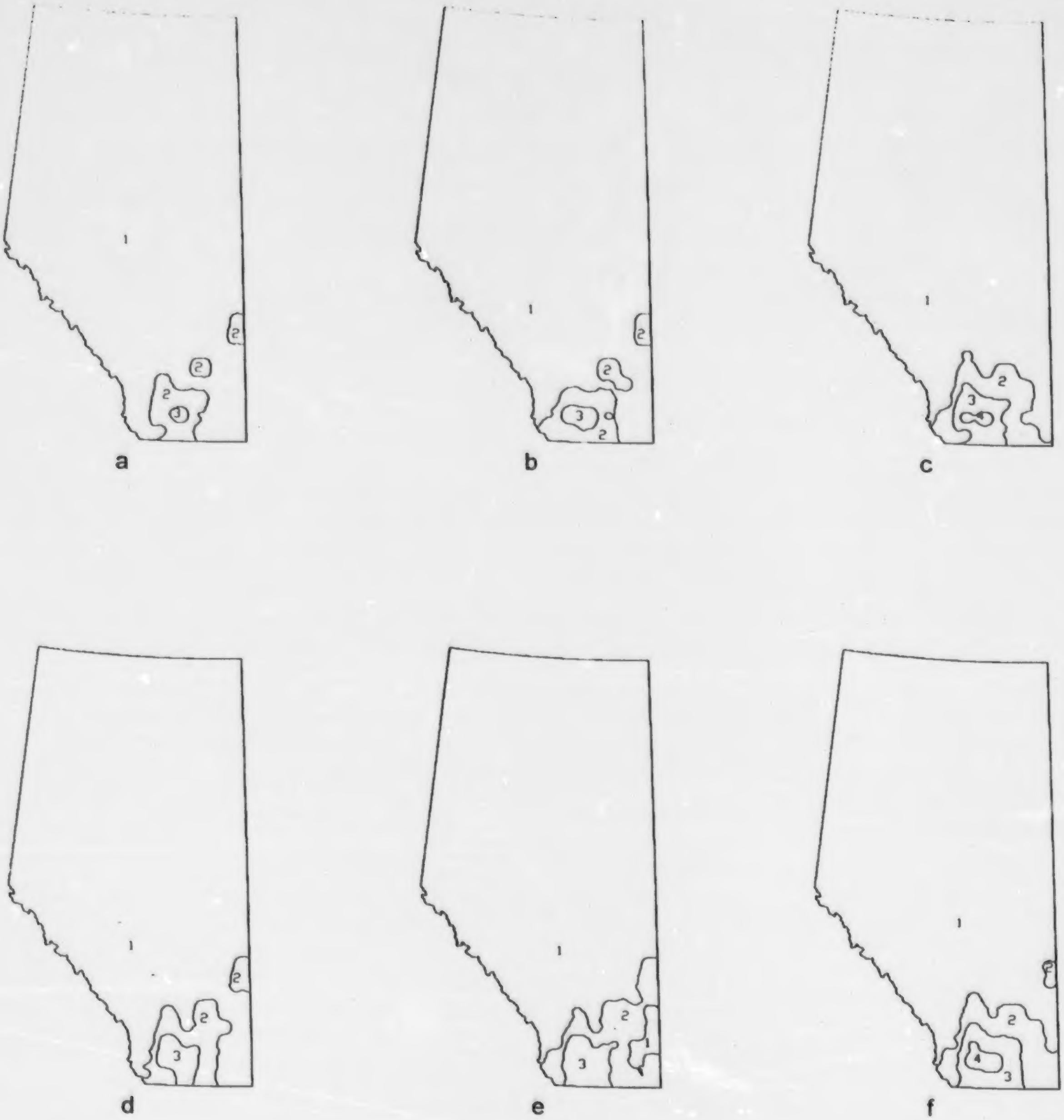
Appendix D-1d: Spring wheat residue (t/ha) distribution across Alberta from canola-wheat-fallow for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_{t}) and historical climate (right = BL): 1 = residue< 1.01; 2 = 1.00<residue<1.51; 3 = 1.50<residue<2.01; 4 = 2.00<residue<2.51; 5 = 2.50<residue<3.01; 6 = 3.00<residue<3.51; 7 = 3.50<residue<4.01; 8 = 4.00<residue.



Appendix D-1e: Canola residue (t/ha) distribution across Alberta from canola-wheat-fallow for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_t) and historical climate (right = BL): 1 = residue< 1.01; 2 = 1.00<residue<1.51; 3 = 1.50<residue<2.01; 4 = 2.00<residue<2.51; 5 = 2.50<residue<3.01; 6 = 3.00<residue<3.51; 7 = 3.50<residue<4.01; 8 = 4.00<residue.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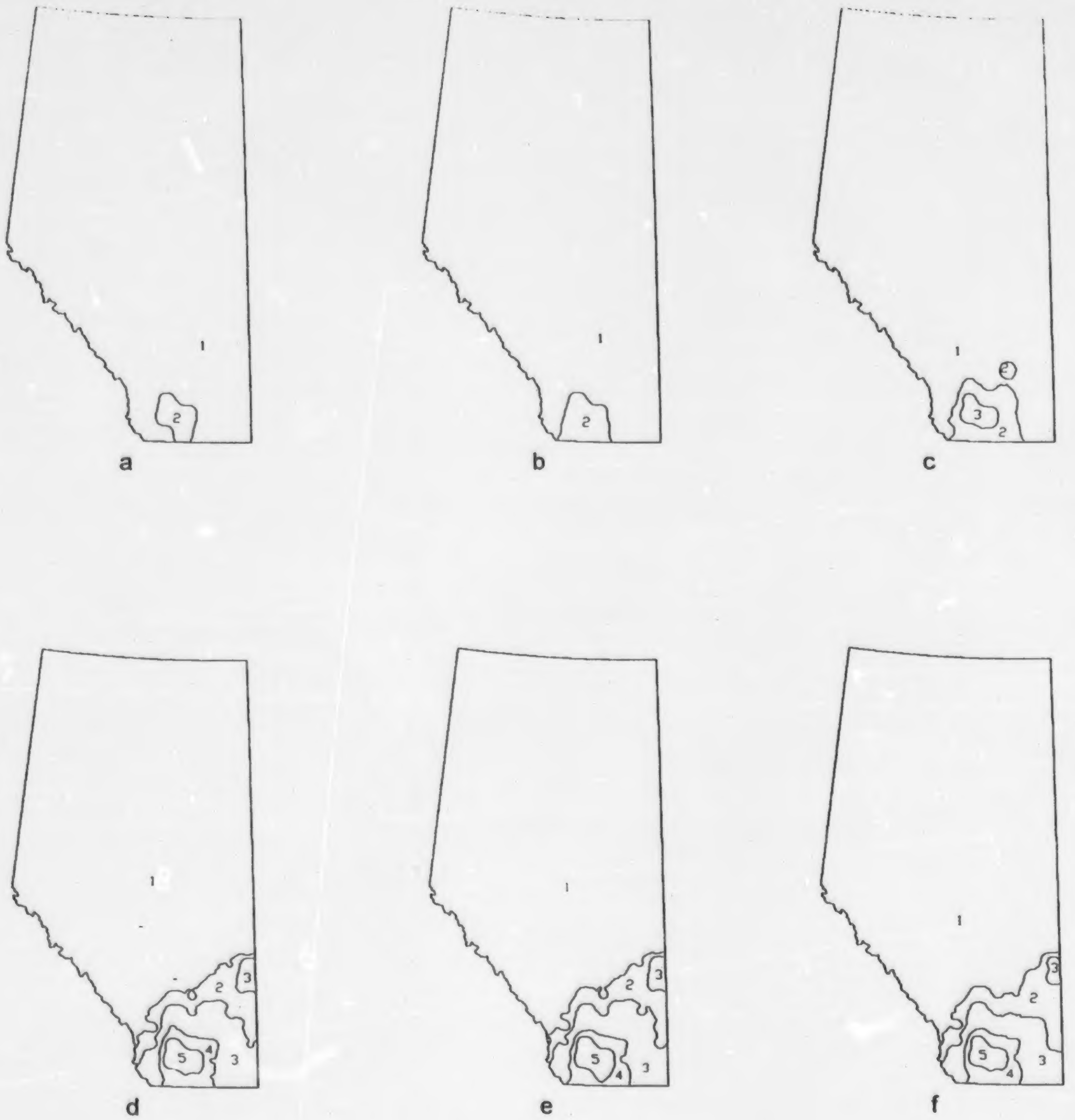
Appendix D-2a: Wind erosion (t/ha) distribution across Alberta from continuous spring wheat for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_{t}) and historical climate (right = BL): 1 = wind< 6.01; 2 = 6.00<wind<11.01; 3 = 11.00<wind<22.01; 4 = 22.00<wind<33.01; 5 = 33.00<wind<55.01; 6 = 55.00<wind.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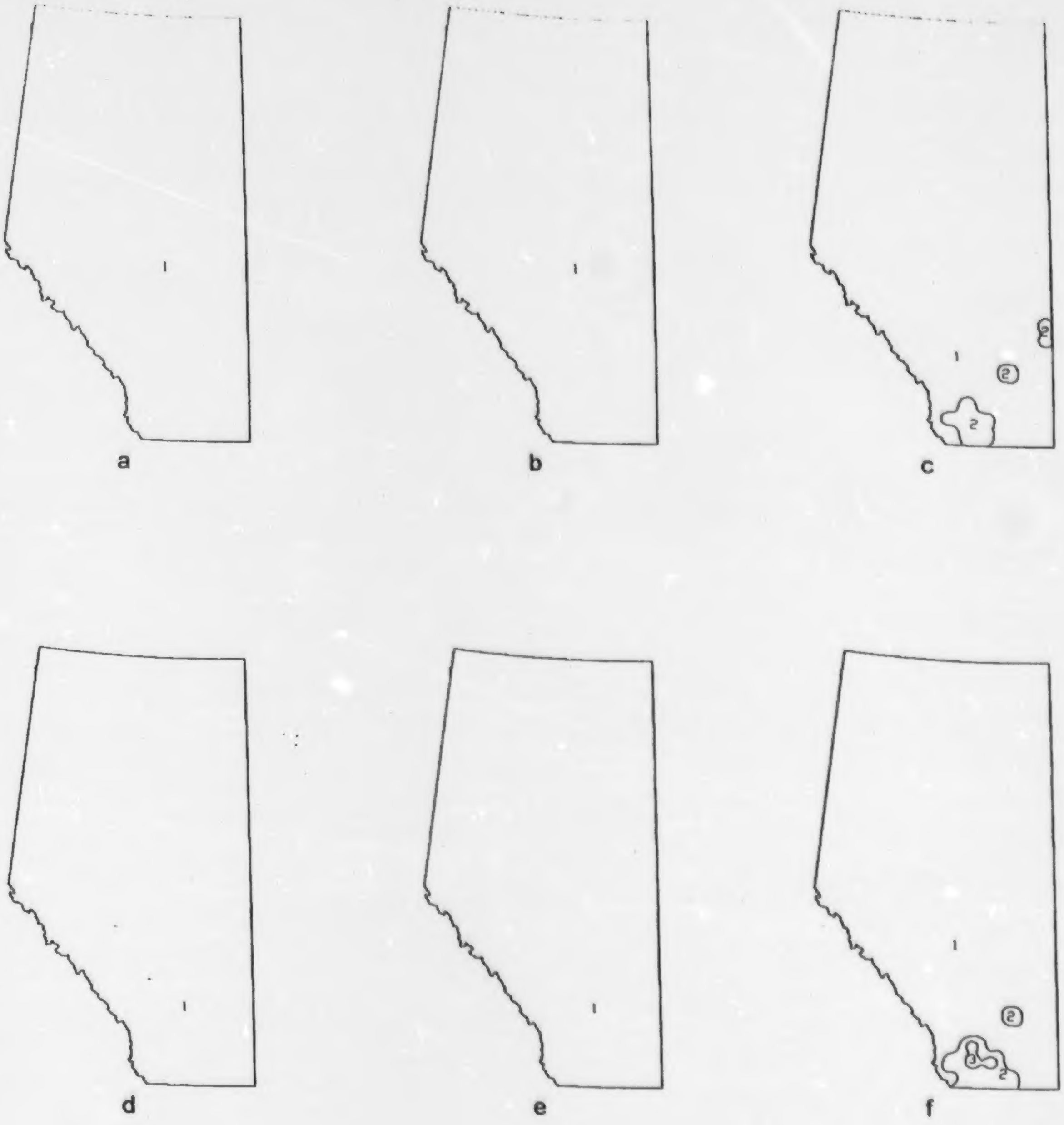
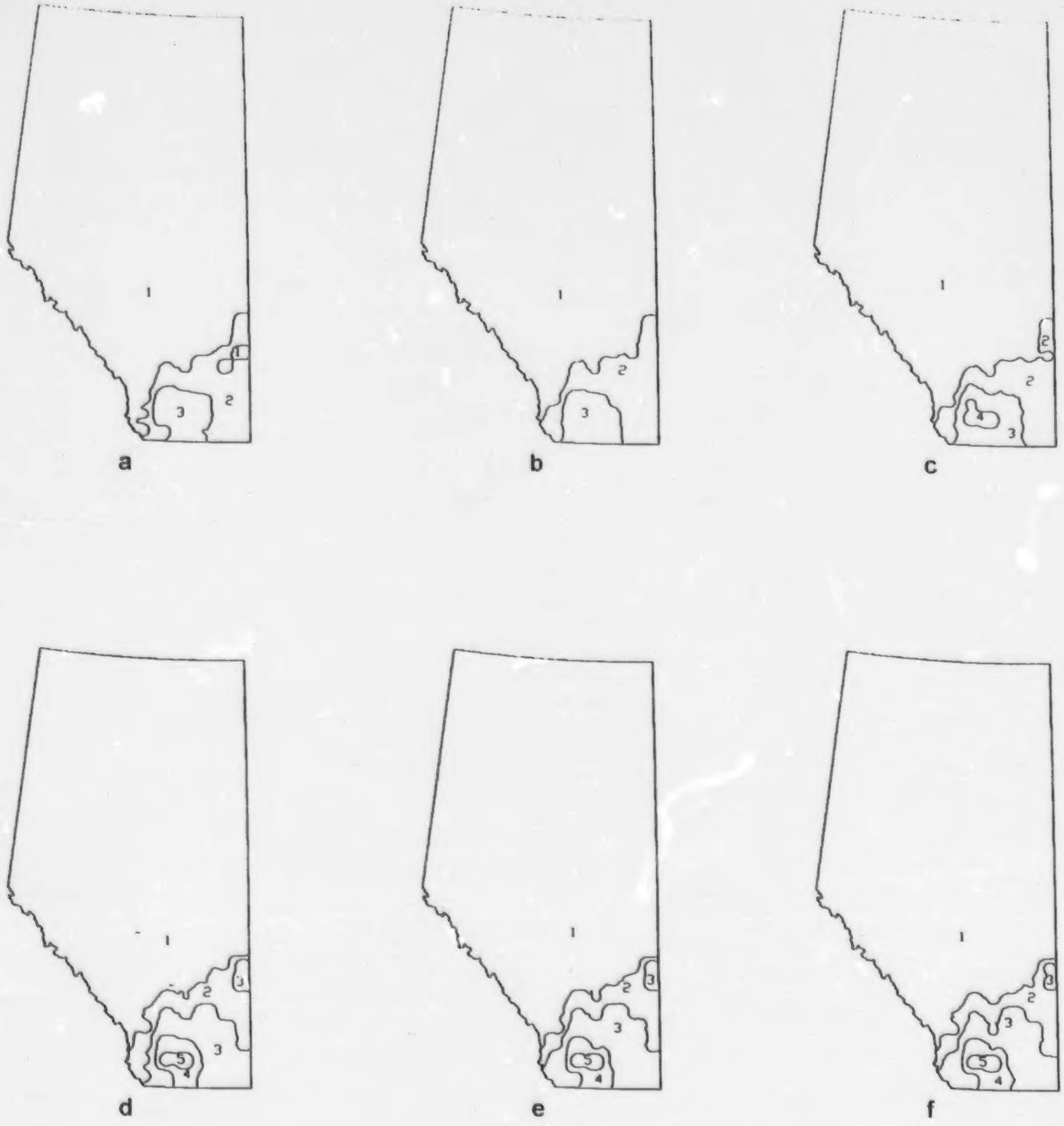
Appendix D-2b: Wind erosion (t/ha) distribution across Alberta from fallow-spring wheat for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_t) and historical climate (right = BL): 1 = wind<6.01; 2 = 6.00<wind<11.01; 3 = 11.00<wind<22.01; 4 = 22.00<wind<33.01; 5 = 33.00<wind<55.01; 6 = 55.00<wind.



Appendix D-2c: Wind erosion (t/ha) distribution across Alberta from fallow-winter wheat for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_{t}) and historical climate (right = BL): 1 = wind<6.01; 2 = 6.00<wind<11.01; 3 = 11.00<wind<22.01; 4 = 22.00<wind<33.01; 5 = 33.00<wind<55.01; 6 = 55.00<wind.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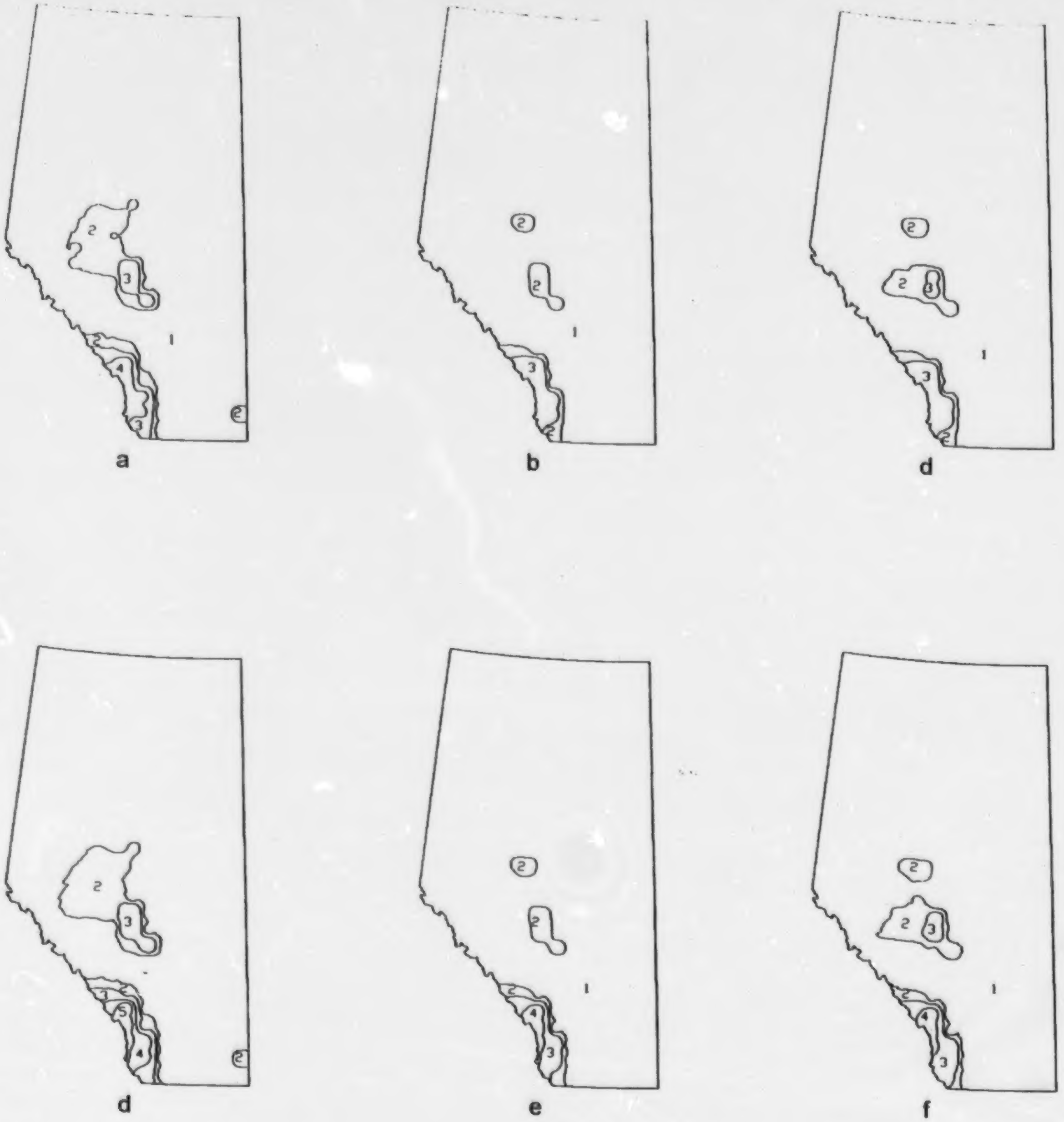
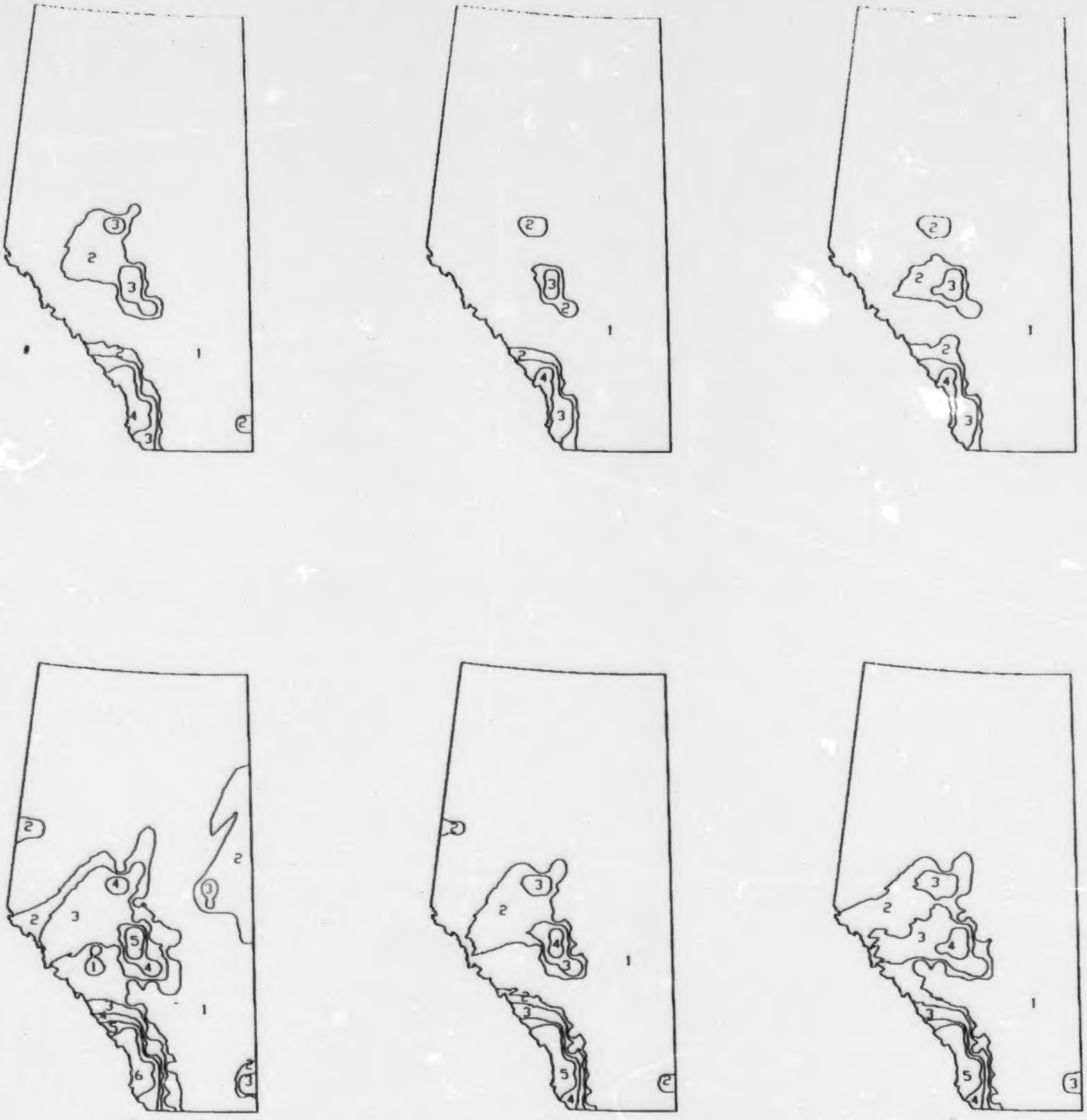
Appendix D-2d: Wind erosion (t/ha) distribution across Alberta from canola-wheat-fallow rotation for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_{l}) and historical climate (right = BL): 1 = wind< 6.01; 2 = 6.00<wind<11.01; 3 = 11.00<wind<22.01; 4 = 22.00<wind<33.01; 5 = 33.00<wind<55.01; 6 = 55.00<wind.



Appendix D-3a: Water erosion (t/ha) distribution across Alberta from continuous spring wheat for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_{t}) and historical climate (right = BL): 1 = water< 6.01; 2 = 6.00<water<11.01; 3 = 11.00<water<22.01; 4 = 22.00<water<33.01; 5 = 33.00<water<55.01; 6 = 55.00<water.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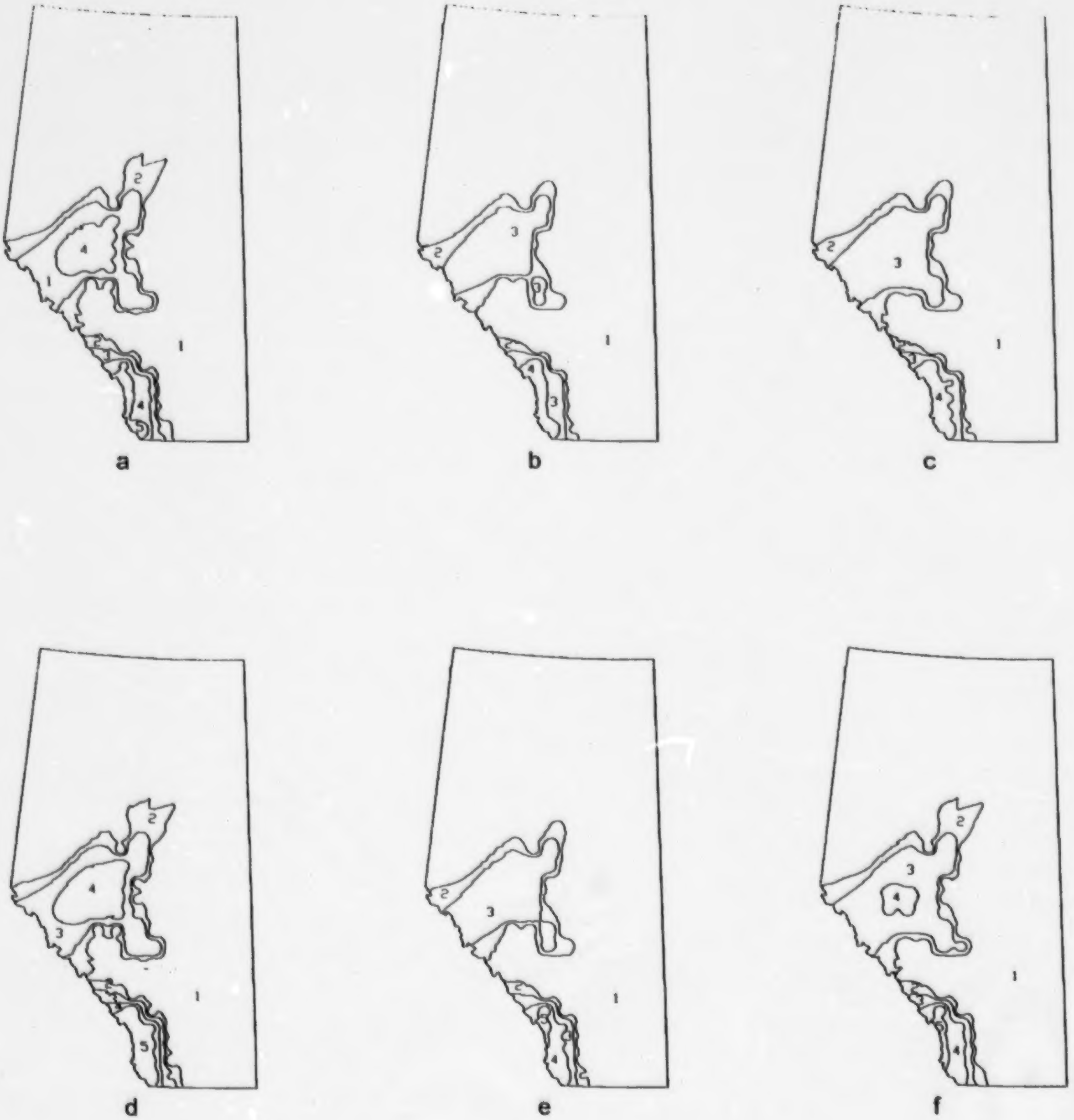
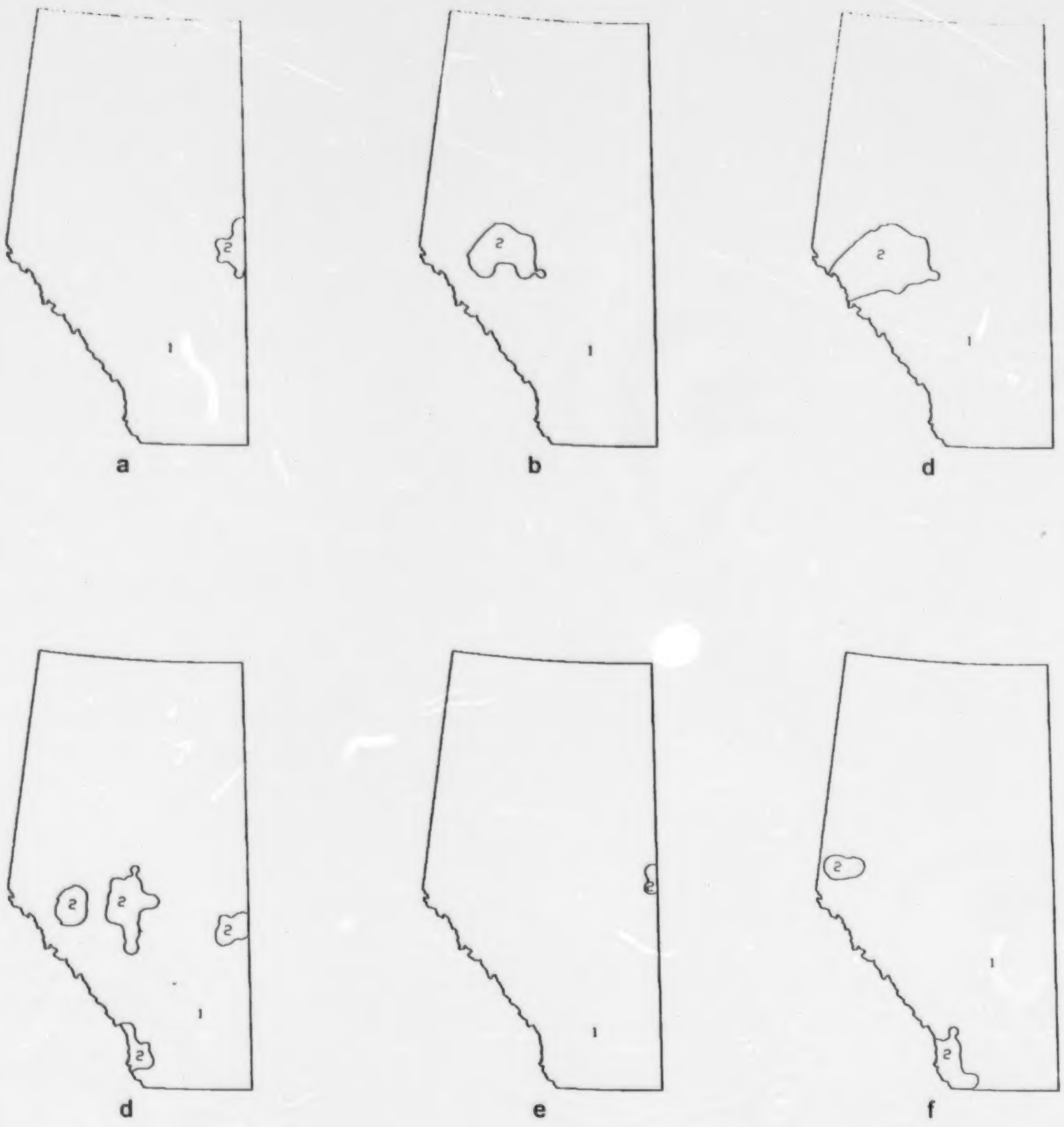
Appendix D-3b: Water erosion (t/ha) distribution across Alberta from fallow-spring wheat for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN$_{tp}$; centre = SN$_{t}$) and historical climate (right = BL): 1 = water<6.01; 2 = 6.00<water<11.01; 3 = 11.00<water<22.01; 4 = 22.00<water<33.01; 5 = 33.00<water<55.01; 6 = 55.00<water.



Appendix D-3c: Water erosion (t/ha) distribution across Alberta from fallow-winter wheat for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_{t}) and historical climate (right = BL): 1 = water<6.01; 2 = 6.00<water<11.01; 3 = 11.00<water<22.01; 4 = 22.00<water<33.01; 5 = 33.00<water<55.01; 6 = 55.00<water.



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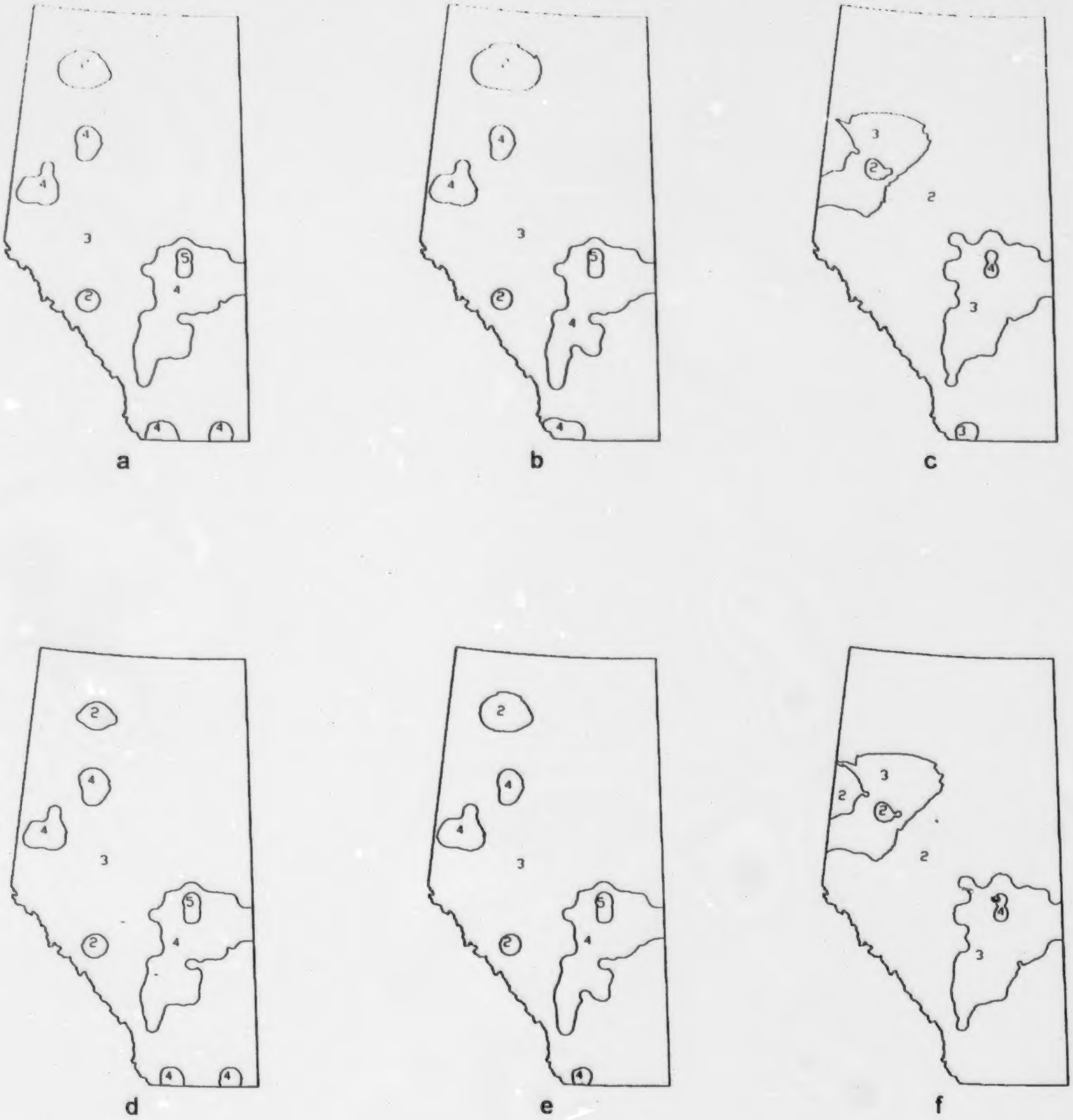
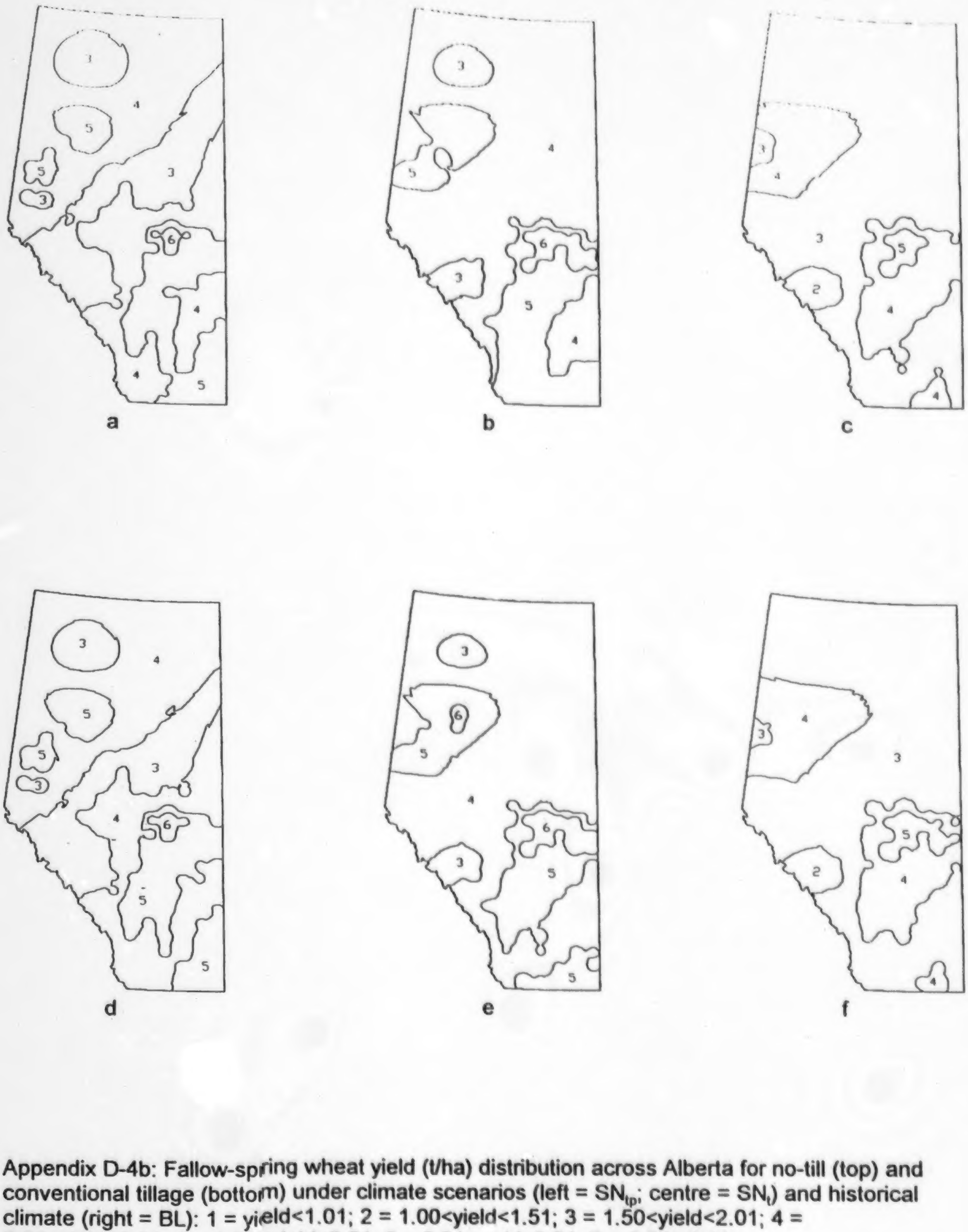
Appendix D-3d: Water erosion (t/ha) distribution across Alberta from canola-wheat-fallow for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_t) and historical climate (right = BL): 1 = water< 6.01; 2 = 6.00<water<11.01; 3 = 11.00<water<22.01; 4 = 22.00<water<33.01; 5 = 33.00<water<55.01; 6 = 55.00<water.



Appendix D-4a: Continuous spring wheat yield (t/ha) distribution across Alberta for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_t) and historical climate (right = BL): 1 = yield< 1.01; 2 = 1.00<yield<1.51; 3 = 1.50<yield<2.01; 4 = 2.00<yield<2.51; 5 = 2.50<yield<3.01; 6 = 3.00<yield<3.51; 7 = 3.50<yield<4.01; 8 = 4.00<yield.



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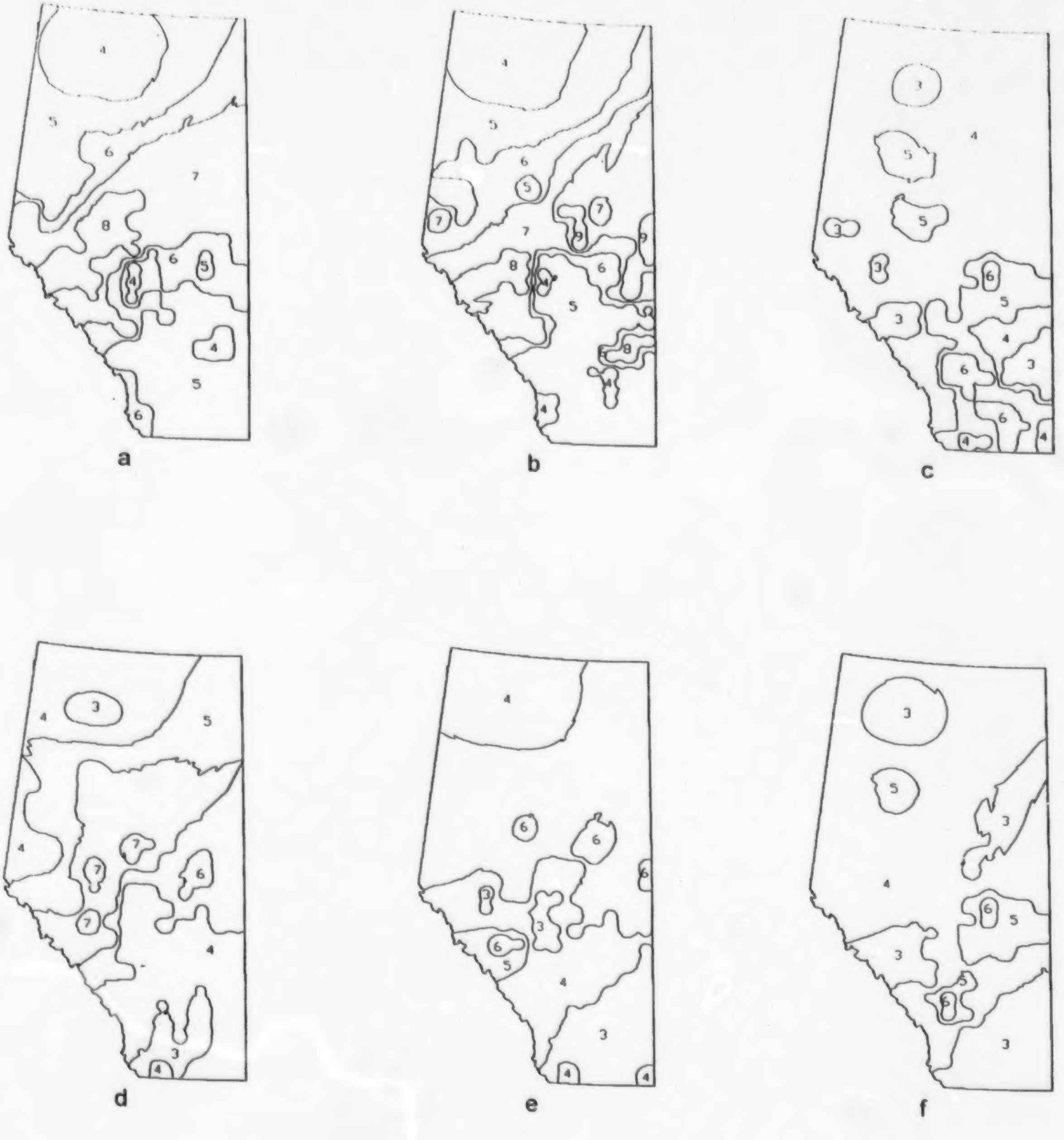
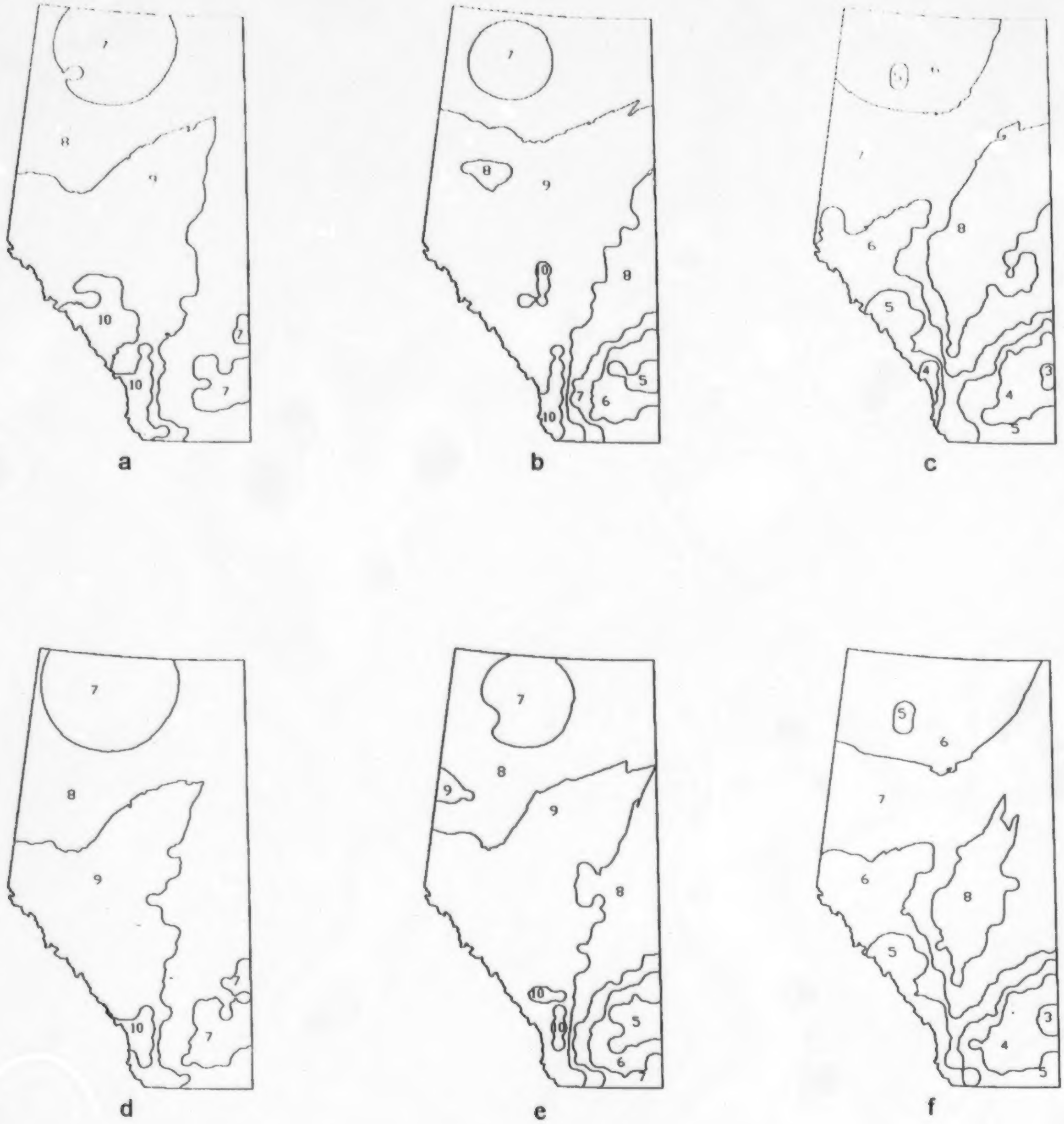
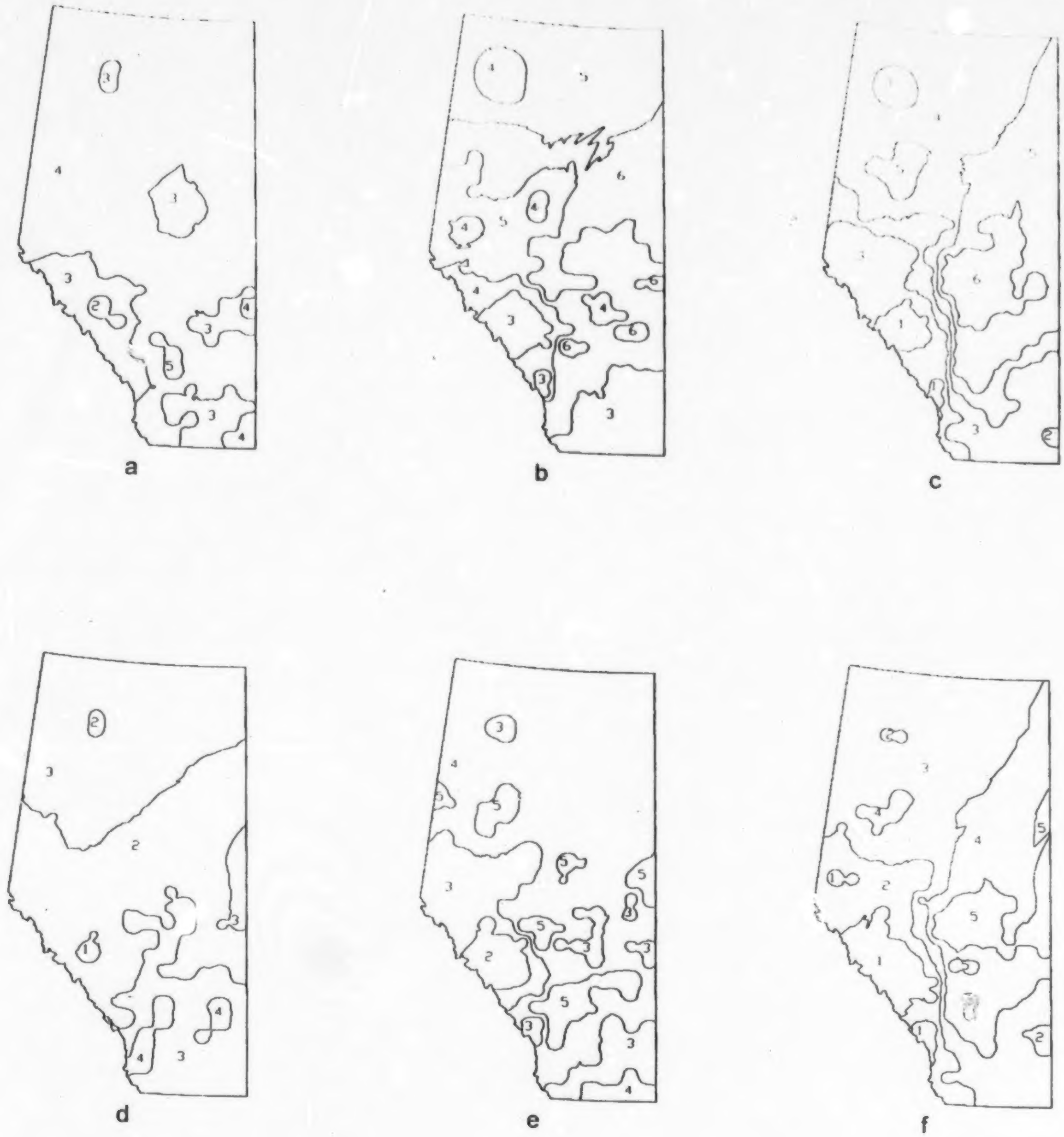
Appendix D-4b: Fallow-spring wheat yield (t/ha) distribution across Alberta for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_{t}) and historical climate (right = BL): 1 = yield<1.01; 2 = 1.00<yield<1.51; 3 = 1.50<yield<2.01; 4 = 2.00<yield<2.51; 5 = 2.50<yield<3.01; 6 = 3.01<yield<3.51; 7 = 3.50<yield.



Appendix D-4c: Fallow-winter wheat yield (t/ha) distribution across Alberta for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_t) and historical climate (right = BL): 1 = yield<1.01; 2 = 1.00<yield<1.51; 3 = 1.50<yield<2.01; 4 = 2.00<yield<2.51; 5 = 2.50<yield<3.01; 6 = 3.00<yield<3.51; 7 = 3.50<yield<4.00; 8 = 4.00<yield.



Appendix D-4d: Spring wheat yield (t/ha) distribution across Alberta from fallow-canola-wheat rotation for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_t) and historical climate (right = BL): 1 = yield< 1.01; 2 = 1.00<yield<1.51; 3 = 1.50<yield<2.01; 4 = 2.00<yield<2.51; 5 = 2.50<yield<3.01; 6 = 3.00<yield<3.51; 7 = 3.50<yield<4.01; 8 = 4.00<yield.



Appendix D-4e: Canola yield (t/ha) distribution across Alberta from fallow-canola-wheat rotation for no-till (top) and conventional tillage (bottom) under climate scenarios (left = SN_{tp}; centre = SN_t) and historical climate (right = BL): 1 = yield< 1.01; 2 = 1.00<yield<1.51; 3 = 1.50<yield<2.01; 4 = 2.00<yield<2.51; 5 = 2.50<yield<3.01; 6 = 3.00<yield<3.51; 7 = 3.50<yield<4.01; 8 = 4.00<yield.